

Chapter 6

Field Artillery Mission Planning, Preparation, and Execution

As the pace of technological innovations and battlefield operations continues to accelerate, a streamlined military decision-making process (MDMP) gains in importance. This applies particularly to FA operations where reaction times in support of close combat, counterfire, and missile defense operations are brief and crucial to overall mission success. As time constraints place increased importance on individual and collective expertise, supporting procedures and techniques must be focused on reducing decision cycles and increasing command post efficiencies and effectiveness. This chapter, therefore, provides an overview of how force artillery CPs participate in force mission planning, preparation, and execution to include essential interfaces with higher, adjacent, and subordinate headquarters. Section I specifically addresses critical interfaces between the force HQ and corps arty CPs during parallel planning leading to the publication of the FA support plan described in Section II. Section III deals with FA-focused planning considerations that also guide FA actions during mission preparation and execution highlighted in Sections IV and V.

SECTION I - FORCE HEADQUARTERS - FORCE ARTILLERY PLANNING INTERFACES

GENERAL

6-1. The MDMP is a continuous process. The process normally begins with the anticipation or receipt of a new mission and specific tasks assigned by a higher HQ OPLAN/OPORD. It is described in detail in FM 101-5.

6-2. The JFC establishes overall guidance for planning, prioritization of missions and targets, and the allocation of resources. Within this context, corps and division commanders and their FSCOORDs work closely during the planning phase. As noted in Chapter 1, FSCOORDs are responsible for advising the force commander on the best use of available FS resources to include FA assets and for developing and implementing the FS plan. The desired effects on the enemy are defined early by the force commander in his FS guidance through targeting objectives against enemy capabilities that could interfere with the achievement of friendly objectives. The resulting schemes of maneuver, fires, and support are developed simultaneously based on the commander's intent and attack guidance.

FORCE MAIN CP PLANNING STEPS AND OUTPUTS

GENERAL

6-3. Under FSCoord supervision, FSCs/FSEs/DOCCs participate in the force HQ mission planning process. With each new operation, the FSCoord and FSCs/FSEs/DOCCs must ensure that the force commander's intent and guidance for fires is quickly, accurately, and reliably transmitted to force artillery CPs. WARNOs and face-to-face meetings should be used to distribute information horizontally, making optimum use of local area communications networks to keep all concerned apprised of the latest information. This is essential to permit parallel FA mission planning.

6-4. An early, effective dialogue between members of FA CPs and force HQ FSC/FSE/DOCC, targeting team, and the ACE is also essential for a responsive return flow of updated FA information to support the force HQ planning process. This information should assist in updating the FA portion of the FS estimate and providing the ACE and targeting team the latest FA data, insights, and conclusions to support TVA, force HQ IPB refinements, and preparation of the intelligence collection plan. Information provided should include the enemy's FA OB and doctrinal template; proposed FA task organizations/missions; status of subordinate and supporting FA formations; limitations and constraints; FA TSS; and positioning, CSS, and security requirements.

RECEIPT OF MISSION

6-5. Upon receipt, the force commander and staff consider implications of the new mission on the current fight and friendly force posture. After an initial assessment, all force FS agencies and supporting FA units are alerted as soon as practicable to initiate their own parallel planning efforts (first WARNO). FSCs/FSEs/FAIOs should also ensure that all IPB products to include likely enemy COAs are released to subordinate HQ as soon as cleared by the force G2/S2 to enhance parallel planning and IPB preparation at the lower levels of command. This WARNO should provide subordinate FA elements the following as a minimum:

- Type of operation to be conducted (offense, defense, etc.).
- General outline of the AO.
- Any known/anticipated changes in the FA's organization for combat, FSCMs, ROE, communications, and CSS.
- Initial timelines.

FORCE HQ MISSION ANALYSIS AND PLANNING GUIDANCE

6-6. Mission analysis by the force HQ is critical for force artillery CPs. This analysis starts to circumscribe the direction of parallel force artillery planning activities. Mission analysis begins with a review of the commander's intent one and two levels higher and focuses on the rapid development of the force HQ IPB; identification of specified, implied, and essential tasks to include those for FA formations; an initial assessment of FS survivability and employment considerations; and a restatement of the mission. This is followed by the force commander's planning guidance. By providing the most recent information drawn from updated FA staff and FA commander's estimates as soon as

possible after the first WARNO, FA CPs can assist in updating the force HQ FS estimate, graphics, facts and assumptions, and FA OB and doctrinal template.

6-7. The force commander's planning guidance normally establishes options to be considered and essential tasks to be addressed. He may include enemy and friendly COAs to be pursued or rejected, associated priorities, and a time plan for mission planning, preparation, and execution. The accompanying commander's statement of intent provides the foundation for developing the eventual concept of operations. By outlining considerations for developing a scheme of maneuver, the commander also sets the stage for the allocation of forces and the design of supporting plans and annexes to include the FS and FA support plans.

6-8. After the mission analysis briefing reporting the results of the FS mission analysis, the force commander should issue specific planning guidance supporting the development of concepts of fires and the fires paragraph for each COA under consideration. A second WARNO should forward all relevant planning guidance to include the following for subordinate and supporting FA units to include:

- A clear statement of how the force artillery will contribute to mission accomplishment and meeting the commander's intent.
- Commander's attack guidance for engaging enemy formations, functions, and capabilities.
- Commander's FS guidance and expectations in support of deep, close, and rear battles; SEAD, counterfire, interdiction, etc.
- Desired effects.
- FS assets to be retained under force HQ control.
- Munition restrictions, priorities, and other CSS considerations.
- Tentative position requirements and changes in the allocation of FA attack and TA assets.

Note: All of the above elements have a direct bearing on FA operations and the development of the FA support plan.

6-9. At this time, results of the initial force IPB should also be passed to all subordinate and supporting units and staff elements. Included are:

- Modified combined obstacle overlay (MCOO).
- Avenues of approach overlay if not on the MCOO.
- Enemy situation templates (SITTEMPs).
- Initial intelligence collection plan.
- Reconnaissance requirements to fill intelligence gaps.

COA DEVELOPMENT

6-10. During the COA development phase, FSCs/FSEs/DOCCs develop tentative concepts of fire to support each maneuver COA based on the force commander's initial targeting objectives and attack guidance. In coordination with the targeting team, the FSE/FSC updates TSS to assist in the initial identification of targets and suspected targets, identifies EFSTs for main and supporting efforts, and contributes to the development of event templates. COA development will also consider FS limitations and capabilities and establish

FSCMs. The FSC/FSE should finally coordinate arrangements in support of each COA with force artillery TOCs to ensure COAs are supportable from an FA perspective.

6-11. Concepts of fires generated during COA development are normally stated in general terms, but should include:

- Generic FA task organization for FA/FS attack and target acquisition systems to assist in developing necessary friendly combat power ratios.
- Tentative HVT nominations based on the G2's/S2's TVA.
- Initial identification of HPTs and EFSTs, target lists, overlays, and draft attack guidance matrix.
- Tentative FA position areas, CSS, communications, movement, and force protection considerations.
- BDA requirements.

6-12. Note: EFSTs are those that, if not accomplished, will cause failure regardless of what other tasks are accomplished. They should be clearly associated with the commander's intent and attack guidance. Targeting standards established during this phase should provide measurable and relevant guidelines for judging accomplishment of EFSTs. The FSCoord develops the "how" for these EFSTs and defines further details during the subsequent wargaming phase.

COA ANALYSIS/WARGAMING

6-13. Specifics on how to fight with fires effectively, to include validation and further definition of HPTs and EFSTs tentatively established during COA development will be confirmed during the wargaming process. Interaction between the targeting team, FSC/FSE/DOCC, and the force artillery will also generate the TSS, HPTL, and AGM in support of individual COAs. BDA requirements are reflected on the AGM and integrated into the force intelligence collection plan. Wargaming also includes the allocation of FA delivery and TA units two levels down and explores the feasibility of FA tactical missions and any associated risks and shortfalls.

6-14. In the wargaming process, the concept of fires evolves into the scheme of fires as a principal supporting element of the concept of operations for each COA. It establishes a focus for fires by establishing EFSTs that describe in sequential order and detail when and where in time and space on the battlefield enemy formations and/or functions will be engaged with indirect fires. These EFSTs can be graphically described in a "scheme of fire matrix" to assist in tracking critical FS events within the command's battlespace during COA execution (for further information see FM 6-20-30). Tactical decisions for each target will determine the time of attack, desired effects on enemy capabilities, degree of damage, and the attack system to be used. Tactical decisions will, in turn, lead to technical decisions specifying the number and type of munitions, units to conduct the attack, and the response time for the attacking unit.

6-15. During the wargame, the FSCoord recommends the most effective use of available FS assets to include CSS requirements such as RSRs and CSRs. He integrates FS into the command's concept of operations and schemes of maneuver and support for each COA under consideration within constraints

imposed by higher HQ. The accompanying COA analysis determines whether FS assets achieved desired effects against critical enemy formations or functions and compares wargaming results based on recorded advantages and disadvantages. It provides an assessment of the adequacy of assigned FS/FA tasks, FA organization for combat, control measures, and movement, displacement, security, and synchronization requirements for subordinate FA formations.

COA COMPARISON

6-16. After wargaming and analysis, COAs are compared to select the one with the greatest probability of success against the enemy COA of greatest concern to the force commander.

COA APPROVAL

6-17. In briefing the commander, staff members draw on wargaming results and targeting team products (HPTL, AGM, TSS, and BDA requirements) to provide details and rationale supporting the proposed COA within their respective areas of expertise. The commander's approval is accompanied by the assignment of specific tasks to subordinate HQ, establishment of priorities for support, and the definition of command relationships and tactical missions.

6-18. The approved scheme of fires and fires paragraphs for the selected COA are expanded by the FSCs/FSEs/DOCCs into the FS plan. It includes further refinement of the HPTL and completion of the AGM as graphic portrayal of the commander's attack guidance. It should specify:

- Priority in which targets are to be attacked.
- How and when targets are to be attacked.
- Desired target effects.
- HPTs requiring BDA.
- Special instructions and restrictions.

6-19. The scheme of fires should be clear and understandable, including sufficient detail for guiding the execution of EFSTs. It should also be the basis for the development of the FA support plan, changing generic FA force arrays to specific organizations for combat and FA tactical mission assignments. Relevant information is disseminated in the form of a third WARNO to all subordinate and supporting FS elements immediately after final COA selection.

OPLAN/OPORD/FS PLAN PRODUCTION

6-20. After COA selection, the force artillery commander, as FSCoord, develops the FS plan in corps/division main CPs. He is assisted by the DFSCoord and FSCs/FSEs/DOCCs in close coordination with force G3s, G4s, and G2s. The FS plan reflects the integration of air interdiction, CAS, naval gunfire, EW, FA, and any other available FS assets to include cannon, rocket, and missile fires in support of close, deep, and rear operations. It provides detailed guidance, assigns execution responsibility to subordinates, allocates resources, and is the basis for refinements. Also included are tasks such as JSEAD and counterfire planning responsibilities and requirements for massing of fires by DS or reinforcing FA units. Since plans concern future operations,

they do not remain static. As estimates are adjusted or changed to reflect current events, plans will also require modification.

6-21. The FS plan establishes the following for subordinate FA formations:

- FA organization for combat.
- Types of targets to be attacked by specific units.
- Type of munitions to be used, desired effects, and time of attack.
- Allocation of ammunition for each phase of the operation based on available supplies and haul capability.
- FS execution matrix to portray graphically the concept of fires (lethal and nonlethal), if needed.
- Reference to the FA support plan (as appendix to the FS annex to expand on FA tasks).
- Positioning restrictions.
- Employment and allocation of FA TA systems with specific TA tasks provided in the accompanying FA support plan.
- Special instructions addressing FA communications requirements.
- Targeting products (TSS, HPTL, AGM, and BDA requirements).
- Instructions to coordinate fires:
 - Clear definition of the deep operations area, if not already defined in the basic plan.
 - FSCMs integration with maneuver control measures.
 - Reference to time of execution of program of fires relative to H-Hour (counterfire, preparations or counterpreparations, JSEAD, etc.).
 - ROE.

6-22. The FS plan is published as an annex to the force PLAN/OPORD. FSCs/FSEs pass this annex and other relevant information to subordinate artillery TOCs. Detailed procedures for preparing the FS plan are found in FMs 6-20-30 and 6-20-40.

SECTION II - THE FIELD ARTILLERY MISSION PLANNING PROCESS

GENERAL

6-23. As noted in Section I, an unobstructed and comprehensive two-way flow of information among FA and force CPs is crucial for the effective integration and employment of available FA assets during the MDMP. Such continuous, effective exchange of information must also be extended to adjacent HQ, subordinate FA elements, and supporting intelligence agencies.

6-24. The force artillery commander provides overall supervision over the FA planning process while simultaneously executing his responsibilities as FSCOORD on the force CP staff. Through personal guidance and command presence at critical times and locations, he ensures the effective horizontal and vertical integration and synchronization of FA activities into the force planning process. At other times, he monitors the development of the FA support plan through the force artillery CofS/XO. A graphic portrayal of the information flow during the MDMP is depicted in Figure 6-1 at the end of this section.

6-25. FA CPs should be focused on deliberate, top-down planning, bottom-up refinement, and execution in consonance with the force commander's and FSCOORD's guidance for FA fires. While the force FSC/FSE/DOCC develops the FS annex in the force main CP, FA CP staff officers provide input to the higher HQ and simultaneously prepare the FA support plan in FA TOCs and ALOCs. Successful FA support plan development and coordination must begin as early as possible and call for a clear understanding of the force commander's intent and concepts of maneuver, fires, and support. These are normally supplemented by verbal and written instructions by the command's FSCOORD and FSC/FSE/DOCC.

FORCE ARTILLERY PLANNING STEPS AND OUTPUTS

GENERAL

6-26. Most of the force HQ planning steps addressed in Section I are mirrored within the force artillery CP accompanied by a shift in focus from FS to the narrower perspective of FA operations. Throughout the process, the FA commander, CofS/XO, and coordinating staff members must continuously update their estimates based on the evolving tactical situation and updated LPB/IPB. Similarly, the FA commander should validate his CCIR at each critical step and insist that the staff respond expeditiously to his information requirements.

6-27. The CofS/XO, who functions as the FA commander's principal assistant during mission planning, preparation, and execution, supervises the integration, coordination, and synchronization of planning activities by special and coordinating staff officers within the FA CP. He manages the information flow and time available; ensures that the staff has the required information, guidance, facilities, and equipment; and adheres to the TSOP. Throughout the planning process, information on the enemy is continuously assessed to confirm, deny, or further develop enemy intentions with focus on FA operations.

RECEIPT OF MISSION

6-28. Upon mission receipt, the FA commander and staff conduct an initial assessment of the new mission and its implications on current operations and the FA force posture. Simultaneously, they ensure that the commander's and staff's estimates are updated and shared to provide the FA staff with the required degree of situational awareness. Preparation of the initial FA-focused IPB in support of the new mission also helps identify characteristics of the battlefield within the force artillery's AO/area of interest. The emphasis is on friendly and enemy FA dispositions, capabilities, limitations, and constraints that will influence friendly and threat FA operations.

6-29. Based on the initial mission assessment, the FA commander supplements the preliminary information and guidance contained in the first force HQ WARNO to focus, expedite, and facilitate parallel planning efforts by the FA staff and to alert subordinate elements (first WARNO in FA channels). Included are:

- The FA commander's statement of his CCIR.
- Guidance on whether to proceed with the full or abbreviated decision-making process.

- Guidance for preparing the initial FA-focused IPB based on initial assumption and available enemy information.
- Tentative organization for combat for subordinate FA attack and TA assets in support of likely enemy and friendly force COAs.
- Any special guidance for employing FA TA assets, survey and met operations, and the planning of FA fires (e.g., SEAD, counterfires, preparations, and interdiction fires).

MISSION ANALYSIS

6-30. Upon receipt of the second force HQ WARNO, the FA CP assesses the force commander's planning guidance. When time is short, the FA commander and staff can conduct mission analysis as a brainstorming session, or the commander may conduct it strictly as a mental activity.

6-31. During mission analysis, the FA CP staff provides the FSC/FSE/targeting team input for the formulation of the force commander's attack guidance and updates TSS to establish or confirm requirements for the timely detection and attack of HPTs. At the same time, the FA CP should gain access and refine, as appropriate, IPB products from the force G2/S2/ACE with focus on FA operational requirements. Included are:

- The MCOO.
- Enemy mobility corridors if not on the MCOO.
- Imagery and other aerial photography.
- Climatic summary from the staff weather officer.

6-32. In close coordination with force HQ, the FA G2/S2 refines the initial FA-focused IPB and intelligence estimate (see Section III for details). Identifying remaining gaps in current intelligence holdings, the G2/S2 may also request assistance from higher, lower, and adjacent intelligence agencies to meet the force artillery's intelligence requirements. As part of the FA CP's TVA, the staff also identifies and nominates to the force HQ FSC/FSE and targeting team tentative FA-focused high-value targets (HVTs)/HPTs. Enemy FA OB and doctrinal, situation, and event templates developed during the FA IPB/estimate process are passed for integration into ACE IPB products. These products should be submitted in time to help brief the FA's role in support of likely threat COAs upon completion of the force HQ mission analysis.

6-33. FA IPB products are also used to focus force artillery collection efforts within the force artillery's area of influence to include:

- Positioning and cuing FA TA radars.
- Identifying named areas of interest (NAIs) to confirm or deny FA operations and dispositions in support of enemy COAs.
- Identifying characteristics of the environment that influence friendly and enemy FA operations.

6-34. During mission analysis, the FA CP staff also initiates the assessment of CSS requirements for subordinate and supporting units against available resources, building on insights from the updated LPB and CSS estimates. Included are:

- CSS consumption requirements by class of supply.

- Ground and air transportation requirements.
- Location of higher HQ and supporting HQ CSS nodes.
- Maintenance priorities for FA systems.
- Comparison of available resources and tentative requirements.
- Estimated casualty rates and ground and air transportation requirements to move casualties and replacements.

6-35. Although the CofS/XO/S3 may lead staff mission analysis efforts, the FA commander should personally specify the force artillery's essential tasks, approve his unit's restated mission, and issue his planning guidance to be passed in the second FA WARNO to subordinate and supporting elements. As part of the process, he also approves or adjusts his initial CCIR. The FA commander's planning guidance should include:

- The restated FA mission and confirmation of specified and implied FA tasks, and EFATs to include CSS requirements and CCIR.
- Preferred organization for combat for subordinate FA attack, CSS, and TA assets in support of force COA development.
- Priorities and guidelines for attacking enemy formations, functions, or capabilities with FA fires to include SEAD, counterfires, interdiction fires, preparations, etc.
- Any special instructions for employing FA survey and met assets.
- Time plan to support follow-on planning and mission preparations to include initial rehearsal guidance.
- FA assets preferably retained under force artillery control.

COA DEVELOPMENT

6-36. The FA commander and staff carefully consider enemy and friendly COAs developed by the force G3/S3 and G2/S2. In support of each friendly COA, they evaluate the most suitable employment of FA assets to include positioning, survivability, communications, and CSS requirements. This includes review of force HQ and force artillery TVA results, IPB updates, and identification of the most probable and most dangerous threat COA from an FA perspective. In the process, they help refine HVTs and HPTs for each COA and identify critical nodes, NAIs, and TAIs from an FA perspective. Recommendations to the force HQ may also include HPTs suitable for attack and/or acquisition by FA systems that warrant integration into the force HPTL. Ultimately, the FA course of action specifies the who, what, when, where, and why, of each EFAT.

6-37. CSS planners will consider the most suitable employment of FA and other supporting logistical assets in support of friendly COAs under consideration by the force HQ. Considering the dynamic nature of FA operations, they will recommend positioning, mission assignments, and priorities for the allocation of CSS resources to include RSRs. Included in their considerations are:

- Mission of each supported element, execution times, and current and planned locations.
- Anticipated changes in tactical missions, command relationships, and AOs.
- Identification of essential FA CSS assets requiring additional protection.
- Locations to match replacement crews with replacement weapons systems.

- Location of medical support facilities, evacuation routes, and evacuation procedures and policies.

6-38. Resulting insights and conclusions addressing the supportability of friendly COAs are offered to the force FSC/FSE for integration into the force COA development process. This may include a tentative allocation and prioritization of generic FA assets in support of each friendly COA's concept of fires. The FA CP should also make initial recommendations for the movement and positioning of FA attack, TA, and CSS assets, and the establishment of permissive and restrictive FSCMs and FA BDA requirements. The FA CP may also suggest options and priorities for the employment and integration of FA TA assets into the force collection plan.

COA WARGAMING/ANALYSIS AND COMPARISON

6-39. During this phase, FA staff members wargame and compare the suitability of remaining COAs from an FA perspective to include CSS considerations (ammunition, POL, prepositioning requirements, loss rates, etc.) and potential problems and deficiencies. Included are the refinement of the concept of fires for each COA into a scheme of fires with attention placed on FA contributions. Full use is made of FA-focused situation, event, and decision support templates, and other TVA/IPB products. In the process, the FA staff further refines these products; identifies and prioritizes additional FA information requirements; assesses the optimum use of FA munitions against enemy equipment, weapons, and formations; and verifies that the FA attack criteria conforms with the force commander's attack guidance for achieving desired effects.

6-40. At the end of this phase, the FA CP recommends to the force HQ the COA considered most suitable from an FA perspective. This is accompanied by supporting rationale, advantages, disadvantages, and options to overcome any residual deficiencies and risks. Further, they advise the FSC/FSE on:

- Position requirements for FA CPs, firing units, and TA radars.
- Displacement requirements and routes of march.
- Survivability requirements to enhance mission accomplishment.
- CSS requirements.

COA APPROVAL

6-41. Approval of the preferred COA by the force commander is accompanied by implementing guidance contained in the force HQ's third WARNO. To refine the selected COA from an FA perspective, the FA staff draws on products developed during COA development, wargaming, and analysis (e.g., AGM, HPTL, TSS, TA plans, schedules of fires, etc.). The FA commander also provides further guidance for changing the approved scheme of fires into the FA support plan. He dispatches the third WARNO in FA channels and:

- Confirms FA tactical mission assignments and task organization for subordinate FA elements, providing for contingencies through o/o missions and careful positioning of assets.
- Passes FA AGM, TSS, HPTL, and destruction criteria.
- Reaffirms CSS priorities to include RSR/CSRs, ATP/ASPs, CCL menus, and timely availability of CSS assets and services.

- Clearly identifies CSG/CSB and MSB/FSB relationships to FA units in their respective sectors and the distribution process for all classes of supplies.
- Confirms transportation requirements peculiar to the operation to include convoy clearance requirements, MSR restrictions, and traffic control procedures.
- Confirms primary and alternate communications nets, frequencies, and CP locations.
- Assesses the adequacy of FA survivability measures to include force protection assets (e.g., ADA, engineers, and maneuver elements).
- Confirms FA rehearsal requirements and radar search zones.

FA SUPPORT PLAN PREPARATION

6-42. The FA support plan is the force artillery commander's plan for employing the fires of all organic or attached FA assets in support of close, deep, and rear operations. Units assigned R, GSR, and o/o missions must also be included. The FA G3/S3 integrates input from the FA CP's coordinating and special staff and synchronizes activities horizontally with adjacent elements and vertically with higher, subordinate, supporting, and supported formations. When completed, the FA support plan will detail how the FA will shoot, move, communicate, acquire targets, and support itself in support of force operations. The FA support plan, as the final product of the planning effort, is reviewed by the FA commander before submission to force HQ for approval and inclusion into the force OPLAN/OPORD as part of the FS plan.

6-43. Reconnaissance and movement may be initiated at any time during the planning/preparation phases. The intent is to place FA elements into position for the timely and effective delivery of FA fires during mission execution. FA movements must be attuned to maneuver force displacements while retaining the capability to provide FA fires in support of close, deep, and rear operations. Reconnaissance should provide information necessary to develop feasible COAs and confirm the tentative plan. FA reconnaissance should be focused on position areas, routes, and enemy avenues of approach threatening FA positions.

6-44. As indicated in Appendix G, the FA support plan normally consists of a main body and a series of supporting tabs, e.g., TA, CSS, movement matrix, survey, met, and schedules of FA fires. Copies of the FA support plan are forwarded to subordinate FA units and to any outside agencies that may participate in the planned fires. This includes units with o/o missions. Since corps/division FS plans seldom reach all potential FA users, critical information in the force basic plan and FS annex is repeated in the FA support plan.

6-45. Development of a complete and detailed FA support plan is preferable to an incomplete one. However, this is frequently not possible in dynamic combat situations. Both written and verbal FRAGOs are used to pass essential information as it becomes available. Some information now is better than complete information received too late to act on. If non-corps arty/div arty assets are affected, FRAGO changes to the FA support plan are prepared by corps arty/div arty and released through the corps/division G3.

OPERATIONAL PHASE	STEPS IN FORCE MILITARY DECISION-MAKING PROCESS	ACTIONS AND OUTPUT	
		FORCE MAIN CP (FSC/FSE, DOCC, ACE, and Targeting Team)	FORCE ARTILLERY CP (Corps Arty, Div Arty, and FA Brigade)
Planning Phase (D3A Decide and Detect Function)	1. <u>Receipt of Mission</u>		
	<input type="checkbox"/> Issue WARNO to staff	<ul style="list-style-type: none"> Staff collects tools for mission analysis <ul style="list-style-type: none"> ➤ Higher HQ OPLAN/OPORD, maps, SOP, FMs ➤ Current IPB, FS and other staff estimates¹ 	<ul style="list-style-type: none"> FA G2/S2s and G4/S4s keep IPB/LPB products updated with evolving situation
	<input type="checkbox"/> Initiate assessment (force commander and staff)	<ul style="list-style-type: none"> Assess higher HQ: <ul style="list-style-type: none"> ➤ Commander's intent, mission, risks ➤ Available assets/AO/constraints ➤ Concept of operations/timelines 	<ul style="list-style-type: none"> FA commander and staff maintain estimates current throughout mission planning, preparation, and execution
	<input type="checkbox"/> Force commander issues guidance (basis for first WARNO ²)	<ul style="list-style-type: none"> Initiate update of FS estimate and IPB 	<ul style="list-style-type: none"> FA staff passes updated info to force HQ
	<input type="checkbox"/> Issue first WARNO to subordinate units to initiate parallel planning. May include: <ul style="list-style-type: none"> ➤ Initial allocation of available time (2/3 rule) ➤ Decision on full/abbreviated MDMP ➤ Type of operation/AO outline ➤ Movements and reconnaissance to initiate ➤ Orders and rehearsal guidance ➤ Liaison requirements 	<ul style="list-style-type: none"> Determine force commander's initial targeting objectives and attack guidance Supplement first WARNO with FS-specific guidance/info: <ul style="list-style-type: none"> ➤ Any known changes in FA organization, FSCMs, ROE, communications, and CSS ➤ Initial FS timelines ➤ Available IPB elements to include potential enemy COAs ➤ Liaison requirements ➤ Initial reconnaissance/movement/positioning requirements 	<ul style="list-style-type: none"> FA CPs initiate concurrent top-down planning, bottom-up refinement process: <ul style="list-style-type: none"> ➤ G3/S3 alerts command group/staff ➤ FA commander/staff assess WARNO impact on FA force posture/current/future flight ➤ Initiate mission-oriented update of CCIR, IPB/LPB, and estimates ➤ Provide info update to force HQ ➤ Dispatch first FA WARNO² to subordinates, to include preliminary employment considerations (attack/TA assets, met, survey, initial CCIR, etc.)
	2. <u>17-Step Mission Analysis</u>		
	<ul style="list-style-type: none"> ➤ Analyze higher HQ order (intent, missions, constraints, AO characteristics) 	<ul style="list-style-type: none"> FSCoord initiates FS mission analysis <ul style="list-style-type: none"> ➤ Review commander's intent (two levels up) with focus on FS operations ➤ Determine implications of new mission, AO, etc.; seek clarifications as necessary 	<ul style="list-style-type: none"> FA commander initiates FA mission analysis <ul style="list-style-type: none"> ➤ Review commander's intent (two levels up) with focus on FA operations ➤ Identify enemy facts/assumption/battlefield characteristics that impact on friendly/enemy FA operations
NOTES: 1-Estimates are updated in a continuous process by commander and staff during mission planning, preparation, and execution. They provide essential input to the MDMP. 2-WARNOs should cover items not in TSOP but necessary to prepare unit for next operation; should provide all relevant information in following areas: general situation - mission/type of operation - known time - critical events - RECON status - time/place for OPORD - special instructions (rehearsals, CSS, etc.) - any graphics.			
LEGEND: <input type="checkbox"/> Action(s) during one of seven MDMP steps <ul style="list-style-type: none"> • Action(s)/output by force FS elements/FA CPs ➤ Supporting actions/output 			

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process

Planning Phase (continued)	2. 17-Step Mission Analysis		
	<input type="checkbox"/> Analyze higher HQ order (cont.)		<ul style="list-style-type: none"> • Provide FSC/FSE initial insights, to include: <ul style="list-style-type: none"> ➢ Friendly/enemy FA dispositions capabilities/limitations/intentions ➢ AO/area of interest effects on FA operations ➢ Tentative FA organization/tactical missions in support of likely enemy/friendly COAs
	<input type="checkbox"/> Conduct initial IPB	<ul style="list-style-type: none"> • Update IPB, FS estimate, and intelligence collection plan, to include FA CP input • Identify impact of enemy facts/assumptions/AO on friendly/enemy FS operations • Update FS estimate based on IPB insights • Assist in developing FS portion of: <ul style="list-style-type: none"> ➢ Enemy OB/doctrinal template/SITTEMPS/event templates/likely threat COAs ➢ Initial intelligence collection plan ➢ Tentative HVTs, first draft of HPTs based on TVA • FAIO ensures release of IPB products ASAP 	<ul style="list-style-type: none"> • Confirm earlier FA IPB input to force HQ -- enemy FA OB/doctrinal template, TSS³, SITTEMP, NAI/TAIs, FA targets/target sets, etc. (submit in time for force HQ mission analysis briefing on likely enemy COAs) • Expand/refine force IPB products: MCOO, enemy mobility/avenues of approach overlay, SITTEMPS, intelligence collection plan, imagery/aerial photography, climatic summary, etc. • Pass FA IPB products⁴ to subordinate elements/higher/adjacent elements • Request assistance to fill intelligence gaps (higher/lower/adjacent elements)
	<input type="checkbox"/> Determine specified, implied, and essential tasks	<ul style="list-style-type: none"> • Identify specified/implied FS tasks; submit EFSTs for approval as basis for initial concept of fires 	<ul style="list-style-type: none"> • Identify specified/implied FA tasks; submit EFATs for FA commander's approval
	<input type="checkbox"/> Review available assets	<ul style="list-style-type: none"> • Examine additions/deletions, changes in tactical missions and FS capabilities, status of delivery/TA means • Identify additional resource requirements 	<ul style="list-style-type: none"> • Confirm availability of fire units/ammo; combat loss projections; estimated consumption rates/shortfalls; security, air/ground transportation, maintenance requirements; etc. • Expand on FA missions/command • Identify FA constraints (ROE, resources, etc.)
	<input type="checkbox"/> Determine constraints	<ul style="list-style-type: none"> • Identify higher HQ FS constraints (resources, ROE, etc.) and limitations 	
	<input type="checkbox"/> Identify critical facts and assumptions	<ul style="list-style-type: none"> • Determine facts/suppositions related to enemy/friendly FS assets, strength, and readiness. 	<ul style="list-style-type: none"> • Determine suppositions related to enemy/friendly FA assets; replace with facts
<p>NOTES:</p> <p>3-TSS assist in the initial identification of targets. Included are: attack system location accuracy requirements/expected target dwell time; size of enemy activity (point or area); status of activity (moving/stationary; and timeliness of information for attack.</p> <p>4-FA-focused IPB products may include enemy air/ground avenues; obstacles/key terrain; percent of slope/trafficability; vegetation/hydrology; line of sight limitations; effects of weather/terrain on trafficability; effects of weather/terrain on enemy/friendly operations; direct enemy threat to FA formations/position areas.</p> <p>LEGEND:</p> <p><input type="checkbox"/> Action(s) during one of seven MDMP steps</p> <p>• Action(s)/output by force FS elements/FA CPs</p> <p>➢ Supporting actions/output</p>			

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process Continued

Planning Phase (continued)	2. 17-Step Mission Analysis (cont)		
	<input type="checkbox"/> Conduct risk assessment	<ul style="list-style-type: none"> Consider FS survivability requirements essential for provision of adequate FS Assess tactical/accidental risks with impact on FS operations/loss of FS combat power Identify risk acceptability/control measures 	<ul style="list-style-type: none"> Assess tactical/accidental risks and impact on FA operations Consider FA survivability requirements Establish level of risk acceptability and control measures
	<input type="checkbox"/> Determine initial CCIR	<ul style="list-style-type: none"> Nominate FS IR to help establish CCIR and assist in FS resource allocation/employment Nominate FS intelligence requirements to fill gaps based on review of initial IPB, CCIR, and FS estimate 	<ul style="list-style-type: none"> Continue FA IPB/TVA update: <ul style="list-style-type: none"> Focus intelligence collection efforts Nominate IR for formulation of FA CCIR Initiate FA reconnaissance Submit intelligence requests to higher HQ
	<input type="checkbox"/> Determine initial reconnaissance annex		
	<input type="checkbox"/> Plan use of available time	<ul style="list-style-type: none"> Refine time plan developed after mission receipt for critical FS events (briefings, rehearsals, etc.) 	<ul style="list-style-type: none"> Continue to refine initial timelines: <ul style="list-style-type: none"> Briefings, rehearsals, displacements Establish movement rates/times
	<input type="checkbox"/> Write restated mission	<ul style="list-style-type: none"> Provide input for FSCoord/force commander <ul style="list-style-type: none"> Employment/retention of FS assets Guidance/expectations for close, deep, rear operations; SEAD; counterfires; etc. 	<ul style="list-style-type: none"> Rewrite FA mission Provide input to force HQ from FA perspective as appropriate
	<input type="checkbox"/> Conduct mission analysis briefing	<ul style="list-style-type: none"> Present FS portion of mission analysis briefing: FS assets, EFSTs, constraints, etc. 	<ul style="list-style-type: none"> Present mission analysis briefing to FA CP staff/command group
	<input type="checkbox"/> Approve restated mission	<ul style="list-style-type: none"> Assess commander's restated mission 	<ul style="list-style-type: none"> Assess force commander's restated mission and finalize FA commander's restated mission
	<input type="checkbox"/> Develop initial commander's intent	<ul style="list-style-type: none"> Should include force commander's guidance for fires as basis for development of COA concepts of fires⁵ 	<ul style="list-style-type: none"> Assess key FA tasks and consider optimum employment of FA assets
	<input type="checkbox"/> Issue commander's planning guidance	<ul style="list-style-type: none"> Should include force commander's FS guidance (attack guidance⁶/targeting effects/⁷priorities/etc.) to help define concepts of fires for COAs 	<ul style="list-style-type: none"> Prepare tentative FA planning guidance Attend force HQ briefing for first hand knowledge of enemy/friendly COAs and guidance
NOTES: 5-Should specify commander's expectations for close support, counterfire, deep fires, SEAD, FS assets retained to be under force HQ control, munitions restrictions, etc. 6-Force commander's attack guidance consists of time of attack, desired effects, units to conduct attack, and system to be used. 7-Targeting effects describe effects on enemy (e.g. disrupt, defeat, or destroy).			
LEGEND: <div> <input type="checkbox"/> Action(s) during one of seven MDMP steps <ul style="list-style-type: none"> Action(s)/output by force FS elements/FA CPs Supporting actions/output </div>			

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process Continued

Planning Phase (continued)	<input type="checkbox"/> Issue second WARNO	<ul style="list-style-type: none"> • Supplement second WARNO with FS-specific instructions for subordinate FS elements: <ul style="list-style-type: none"> ➤ Clear statement of how FS will contribute to mission accomplishment ➤ Commander's attack guidance/targeting effects/expectations in support of close, deep, and rear battles ➤ FS assets retained under force HQ ➤ CSS restrictions and priorities ➤ Tentative position requirements/changes in task organizations 	<ul style="list-style-type: none"> • Assess force HQ planning guidance (second WARNO) <ul style="list-style-type: none"> ➤ Determine FA contributions to mission accomplishment/meeting force commander's intent ➤ Adjust FA mission analysis/tentative planning guidance • Prepare second WARNO in FA channels • Issue FA commander's planning guidance
	<input type="checkbox"/> Review facts and assumptions	<ul style="list-style-type: none"> • Validate FS-relevant facts/assumptions/implications on FS mission throughout MDMP 	<ul style="list-style-type: none"> • Continue to update estimates with new/significant FA-relevant info/facts/assumptions
	3. <u>COA Development</u>		
	<input type="checkbox"/> Analyze relative combat power	<ul style="list-style-type: none"> • Analyze relative FS combat power: <ul style="list-style-type: none"> ➤ Consider enemy strengths/weaknesses ➤ Propose generic FS organization for combat for each COA 	<ul style="list-style-type: none"> • Building on FA operations estimate: <ul style="list-style-type: none"> ➤ Reconfirm status of FA assets/update info on enemy FA OB, doctrinal templates, etc. ➤ Propose FA generic organization for combat in support of friendly COAs ➤ Explore optimum use of FA assets as part of FS contribution to battle ➤ Compare relative FA strengths/weaknesses
	<input type="checkbox"/> Generate options	<ul style="list-style-type: none"> • Assist in determining decisive points/supporting efforts and EFSTs • Advise on integration of fires with maneuver and other BOS • Advise on elimination/modification of COAs 	<ul style="list-style-type: none"> ➤ Focus FA IPB on FA-relevant intentions, enemy FA OB/positions, corridors, etc. ➤ Refine higher HQ products (event templates, SITTEMPs, decision support templates, etc.) ➤ Integrate FA TA assets into intelligence plan
	<input type="checkbox"/> Array initial forces	<ul style="list-style-type: none"> • Array generic FS assets in support of each friendly COA (Attack, TA, CSS, etc) 	<ul style="list-style-type: none"> • Determine FA assets required to accomplish the FA mission • Identify any shortfalls
LEGEND: <input type="checkbox"/> Action(s) during one of seven MDMP steps <ul style="list-style-type: none"> • Action(s)/output by force FS elements/FA CPs ➤ Supporting actions/output 			

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process Continued

Planning Phase (continued)	3. <u>COA Development (cont)</u>		
	<input type="checkbox"/> Develop scheme of maneuver	<ul style="list-style-type: none"> Effort will define close/rear/deep operations; plans for recon and security, main and supporting efforts; FS priorities; C2 arrangements, etc. Refine HVT/HPT/EFSTs with G3/S3/G2/S2 using TVA Develop concept of fires for each friendly COA, refining commander's FS guidance Consider requirements for: <ul style="list-style-type: none"> FS position areas, triggers, security augmentations, CSS, BDA FSCMs, synchronization, communications Conduct suitability/feasibility/etc. tests for concepts of fire for each COA 	<ul style="list-style-type: none"> Use TVA to assist in identification of HVTs and HPTs suitable for engagement with FA fires: <ul style="list-style-type: none"> Determine initial tasks and purposes for FA systems Determine HVT/HPTs from FA perspective
	<input type="checkbox"/> Assign headquarters	<ul style="list-style-type: none"> Tailor employment of FS assets to mission requirements and type of operation <ul style="list-style-type: none"> Task organize/clarify responsibilities Minimize fratricide risk Synchronize combat power at decisive points 	<ul style="list-style-type: none"> Recommend proposed organization for combat and command relationships for subordinate force arty units
	<input type="checkbox"/> Prepare COA statement and sketches	<ul style="list-style-type: none"> Prepare FS portion of COA sketch <ul style="list-style-type: none"> Portray how FS will assist in mission success Provide overview of FS capabilities, limitations, and requirements Show concept of fires⁸/FSCM/CPs/ displacement, etc. Consult with force arty to verify prior to briefing 	<ul style="list-style-type: none"> Provide input/confirm FA portion of FS COA sketches, to include: <ul style="list-style-type: none"> Positioning, survivability, BDA, communications, and CSS requirements Refinement of HVT/HPTs for each COA Critical FA nodes, TAI/NAIs, etc. Initial identification for movement, positioning of FA attack, TA, and CSS assets Establishment of FSCMs
	4. <u>COA Analysis (Wargame)</u>		
	<input type="checkbox"/> Gather tools	<ul style="list-style-type: none"> Collect and make available for each COA: FS estimate, FS portion of event templates, TVA results 	<ul style="list-style-type: none"> CofS/XO supervises collection of planning tools - includes LPB/IPB products/estimates/higher HQ info/etc.
	<input type="checkbox"/> List all friendly forces	<ul style="list-style-type: none"> Confirm available FS assets for all COAs, to include command relationships and constraints 	<ul style="list-style-type: none"> Confirm availability of all FA assets
Note: 8-The concept of fires should identify the who (generic tasks organization), what (tasks), when, where, how, and why (purpose) for each subordinate FS element.			
LEGEND: <div> <input type="checkbox"/> Action(s) during one of seven MDMP steps <ul style="list-style-type: none"> Action(s)/output by force FS elements/FA CPs Supporting actions/output </div>			

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process Continued

Planning Phase (continued)	4. <u>COA Analysis (Wargame) (cont)</u>		
	<input type="checkbox"/> List assumptions	<ul style="list-style-type: none"> • Validate FS-relevant facts/assumptions 	<ul style="list-style-type: none"> • Validate FS-relevant facts/assumptions
	<input type="checkbox"/> List known critical events and decision points	<ul style="list-style-type: none"> • Determine FS contribution in support of essential tasks identified during mission analysis/COA development (FS NAI/TAIs, EFSTs) 	<ul style="list-style-type: none"> • Determine FA contribution in support of essential tasks identified during mission analysis/COA development (FA NAI/TAIs, EFATs)
	<input type="checkbox"/> Determine evaluation criteria	<ul style="list-style-type: none"> • Identify factors measuring effectiveness/efficiency of FS contribution for COA success and failure 	<ul style="list-style-type: none"> • Identify factors measuring effectiveness/efficiency of FA contribution for COA success and failure
	<input type="checkbox"/> Select wargaming method	<ul style="list-style-type: none"> • As determined by G3/S3/TSOP 	<ul style="list-style-type: none"> • As determined by FA G3/S3/TSOP
	<input type="checkbox"/> Select method to record and display results	<ul style="list-style-type: none"> • As determined by G3/S3/TSOP 	<ul style="list-style-type: none"> • As determined by FA G3/S3/TSOP
	<input type="checkbox"/> Wargame the battle and assess results	<ul style="list-style-type: none"> • Identify risks and required CS/CSS assets for each COA • Analyze FS events two echelons down • Record wargame results and refine concepts of fires into scheme of fires for each COA: <ul style="list-style-type: none"> ➢ HVTs/HPTs and FS portion of event templates ➢ FA attack guidance/synchronization matrix ➢ FS portion of decision support template • Use record results to identify COA strength and weaknesses from FS perspective • Confirm FS organization for each COA and HPT: <ul style="list-style-type: none"> ➢ Draft HPTL, AGM, TSS 	<ul style="list-style-type: none"> • Wargame COA focused on refining the FA elements of the concepts of fires into schemes of fires: <ul style="list-style-type: none"> ➢ Integrate FA CSS considerations ➢ Use FA-focused situation, event, and decision support templates and other TVA products ➢ Refine FA position, displacement, and survivability requirements ➢ Monitor development of HPTs by FSC/force targeting team • Ensure scheme of fires for each COA is sound from FA perspective; advise force HQ accordingly
	5. <u>COA Comparison</u>		
	<input type="checkbox"/> Analyze/evaluate COAs from functional perspective	<ul style="list-style-type: none"> • Analyze each COA, compare strength/weaknesses, and highlight advantages/disadvantages from FS perspective • Assess risks 	<ul style="list-style-type: none"> • Analyze each COA, compare strength/weaknesses, and highlight advantages/disadvantages from FA perspective • Identify probability/severity of FA related fratricides/other hazards; establish control measures; review FSCMs; and advise FSC/FSE
	<input type="checkbox"/> Wargame briefing (other staff officers)	<ul style="list-style-type: none"> • Brief results of FS analysis: <ul style="list-style-type: none"> ➢ Most advantageous COA from FS perspective ➢ Adequacy of schemes of fires and supporting assets (CSS, protection, etc.) 	<ul style="list-style-type: none"> • Brief results of wargame, analyses, and comparison to other FA staff members
	<input type="checkbox"/> Staff/CofS recommends preferred COA to commander	<ul style="list-style-type: none"> • FSC/FSE enters briefing with updated FS estimate 	<ul style="list-style-type: none"> • Brief results of wargame and analyses to FA commander
LEGEND: <input type="checkbox"/> Action(s) during one of seven MDMP steps <ul style="list-style-type: none"> • Action(s)/output by force FS elements/FA CPs ➢ Supporting actions/output 			

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process Continued

Planning Phase (continued)	6. <u>COA Approval</u>					
	<input type="checkbox"/> Staff/CofS recommends preferred COA to commander	<ul style="list-style-type: none">Assess implications and take actions as necessary:<ul style="list-style-type: none">➤ Finalize selected scheme of fire, etc. or reenter planning process➤ Finalize HPTL, AGM, TSS, etc.	<ul style="list-style-type: none">Force HQ decision brief preferably attended by force arty representative			
	<input type="checkbox"/> Commander issues additional guidance, to include: <ul style="list-style-type: none">➤ CS/CSS priorities.➤ Rehearsals and orders preparations.	<ul style="list-style-type: none">Proceed with detailed rehearsal preparations (combined arms and FS)	<ul style="list-style-type: none">Assess force commander's decision and guidance			
	<input type="checkbox"/> Staff issues third WARNO	<ul style="list-style-type: none">Supplement WARNO with FS-specified guidance	<ul style="list-style-type: none">Assess content of third WARNO			
	7. <u>Orders Production</u>					
	<input type="checkbox"/> Staff refines selected COA, completes plan, and issues orders. Produces clear: <ul style="list-style-type: none">➤ Concept of operations➤ Scheme of maneuver➤ Scheme of FS➤ Scheme of support (CSS)	<ul style="list-style-type: none">Expand scheme of fires into FS plan, reflecting current events, guidance, and capabilitiesConfirm:<ul style="list-style-type: none">➤ Specific command and control relationships➤ FA tactical mission assignments➤ HPTL, AGM, TSS, execution responsibilities➤ Intelligence collection plan➤ BDA requirementsAssist subordinate staffs/units with planning and coordination	<ul style="list-style-type: none">Staff proceeds with concurrent development of FA support plan:<ul style="list-style-type: none">➤ Task organizes/assigns mission in accordance with (IAW) force HQ guidance.➤ Approves level of acceptable risks.Commander approves FA support plan for:<ul style="list-style-type: none">➤ Dispatch to force HQ and integration into force FS plan/OPLAN/OPORD➤ Use by subordinate elements/others participating in planned firesStaff/commander review subordinate unit plans for compliance			
<input type="checkbox"/> Commander reviews and approves OPORD	<ul style="list-style-type: none">Distribute OPLAN/OPORDPresent FS portion of OPLAN briefing⁹	<ul style="list-style-type: none">Force HQ OPORD brief preferably attended by force artillery representative				
<p>Note: 9-FS orders brief will normally include scheme of fires; EFSTs/HPTs/HPTL; purpose for fires; availability of FS/CSS assets, status, allocation and priority; clearance of fires procedures; AGM; FSCMs; cutoff time for target refinement; rehearsal instructions; communications/retransmission requirements.</p> <p>LEGEND:</p> <table><tr><td><input type="checkbox"/> Action(s) during one of seven MDMP steps</td><td><ul style="list-style-type: none">Action(s)/output by force FS elements/FA CPs</td><td><ul style="list-style-type: none">➤ Supporting actions/output</td></tr></table>				<input type="checkbox"/> Action(s) during one of seven MDMP steps	<ul style="list-style-type: none">Action(s)/output by force FS elements/FA CPs	<ul style="list-style-type: none">➤ Supporting actions/output
<input type="checkbox"/> Action(s) during one of seven MDMP steps	<ul style="list-style-type: none">Action(s)/output by force FS elements/FA CPs	<ul style="list-style-type: none">➤ Supporting actions/output				

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process Continued

Preparation Phase (D3A Detect Function)	7. <u>Orders Production (cont)</u>		
	<input type="checkbox"/> Commander/staff supervise preparations; maintain continuity between current and future operations	<ul style="list-style-type: none"> FSCCOORD/DFSCCOORD supervise preparations to include implementation of risk management controls 	<ul style="list-style-type: none"> FA command group and FA CPs supervise preparations, maintain current info on friendly/enemy situation and status of current battle.
	<input type="checkbox"/> Proceed with published OPLAN/OPORD or enter into MDMP under constrained conditions	<ul style="list-style-type: none"> FSC/FSE/DOCC implement FS plan or adjust as required by evolving situation with FRAGOs, etc. 	<ul style="list-style-type: none"> Corps arty/div arty/FA brigade CP: <ul style="list-style-type: none"> ➤ Implement FA support plan or adjust as required. ➤ Continue reconnaissance efforts, movements, and displacements ➤ Coordinate and conduct met, TA, survey and CSS operations ➤ Maintain commander's and staff estimates/LPB/IPB
	<input type="checkbox"/> Detect/track targets; process intelligence information; focus on HPTs	<ul style="list-style-type: none"> FSC/FSE/DOCC implement FS plan or adjust as required by evolving situation with FRAGOs, etc. TA assets find/track specific targets 	<ul style="list-style-type: none"> FA G2/S2: <ul style="list-style-type: none"> ➤ Ensures continuing FA target coverage. ➤ Establishes/refines target locations; keeps FSC/FSE/FAIO informed FA TA assets find/track specific targets
	<input type="checkbox"/> Conduct validity checks	<ul style="list-style-type: none"> Validate/refine targeting products on basis of more accurate/additional info (HPTL, AGM, etc.); pass latest information to FA CPs ACE/FAIO and FSC/FSE/DOCC respond to information requests within capability Continue to develop targets for corps arty; pass information to corps arty/firing units 	<ul style="list-style-type: none"> Corps arty/div arty/FA brigade(s) adjust FA support plan as necessary FA G2/S2 requests FA targeting info from systems/agencies not under FA control Corps arty/FA brigade(s) integrate targets into FA support plan for engagement during execution phase Confirm satisfactory progress of synchronization and integration (liaison, organization for combat, FA security, movements/positioning, CSS, etc.)
LEGEND: <input type="checkbox"/> Action(s) during one of seven MDMP steps <ul style="list-style-type: none"> Action(s)/output by force FS elements/FA CPs ➤ Supporting actions/output 			

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process Continued

Preparation Phase (continued)	7. <u>Orders Production (cont)</u>		
	<input type="checkbox"/> Conduct rehearsals - <u>no wargame</u>	<ul style="list-style-type: none">Participate in combined arms rehearsals. Verify:<ul style="list-style-type: none">Synchronization/integration of FS with other BOS (maneuver, CSS, ADA, C2, etc.)FS HPTs/EFSTs, AGM, and friend/foe locationsFSCMs, ROE, and clearance of fire procedures.TA plan and BDA requirementsConduct FS rehearsals:<ul style="list-style-type: none">Refine FS plan and targets, check movements, positioning, and protection of FS assetsPass FRAGO changes to corps arty/div arty CPsBe prepared to assume responsibilities as alternate CP or for selected CP functions	<ul style="list-style-type: none">Participate in combined arms/FS rehearsals (time permitting):<ul style="list-style-type: none">Integrate latest info/guidance into FA support planConduct FA tactical/digital rehearsals with focus on:<ul style="list-style-type: none">METT-TC updatePositioning of FA firing, CSS, TA elementsRoutes/order of march/movement timesObservation/survey supportAvailability of fire units and CSSValidation of FSCM/ROE/air corridorsUpdated target lists/schedulesCommunication assets, retransmission sites, and alternate netsAccess to and connectivity with acquisition assets/agenciesObservation/survey supportFA commander conducts back briefs to enhance understanding
Execution Phase (D3A Detect, Deliver, and Access Functions)	<input type="checkbox"/> Engage HPTs	<ul style="list-style-type: none">FSC/FSE/DOCC direct FA CPs/delivery units to engage HPTs if meeting attack criteria (TSS and attack guidance)<ul style="list-style-type: none">Corps executes targets under centralized control (e.g., ATACMS) with execution orders sent to executing elementsTargets under decentralized control are passed to appropriate echelon (div arty/FA brigade) directly from TA source/processing agenciesFSC/FSE fills requirements within context of available resources and commander's intentEngage targets of opportunity	<ul style="list-style-type: none">Maintain commander's/staff estimates current (status, capabilities, and limitations of organic, attached or reinforcing elements)Corps arty/FA brigade/fire unit(s) execute fire mission (FM), record FM, update ammunition status; reposition FA assets with direction/pace of maneuver elements and deep/rear battle requirementsDiv arty/FA brigade(s) executeProcess/forward requests for additional FS to the force FSC/FSEValidate FM against HPTL, TSS, attack guidance, ROE, FSCMs, execution matrix, etc.Engage targets after appropriate positive clearance of fires by maneuver elements<ul style="list-style-type: none">Observation/survey supportAvailability of fire units and CSS
LEGEND: <input type="checkbox"/> Action(s) during one of seven MDMP steps			
<ul style="list-style-type: none">Action(s)/output by force FS elements/FA CPs➤ Supporting actions/output			

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process Continued

Execution Phase (continued)	<input type="checkbox"/> Supervise implementation of risk management controls	<ul style="list-style-type: none"> Supervise implementation and analyze effectiveness of FS risk management controls 	<ul style="list-style-type: none"> Supervise implementation and analyze effectiveness of FA risk management controls Continue to refine FSCM/positive clearance of fires procedures and understanding of ROE/IFF procedures
	<input type="checkbox"/> Conduct BDA	<ul style="list-style-type: none"> Assess whether targeting objectives have been met; plan additional fires as required If necessary, reengage targets to meet targeting objectives 	<ul style="list-style-type: none"> Pass BDA info from FA TA assets to FSC/FSE/DOCC Request BDA support from higher HQ as appropriate Reengage targets as directed
LEGEND: <input type="checkbox"/> Action(s) during one of seven MDMP steps <ul style="list-style-type: none"> Action(s)/output by force FS elements/FA CPs ➤ Supporting actions/output			

Figure 6-1. Force - FA CP Interfaces During the Military Decision-Making Process Continued

SECTION III - FIELD ARTILLERY PLANNING CONSIDERATIONS

FIELD ARTILLERY-FOCUSED INTELLIGENCE PREPARATION OF THE BATTLEFIELD

GENERAL

6-46. Within the current force structure, based on their requirements, different echelons use different collectors and use intelligence from other echelons. Force commanders drive the command's intelligence effort by clearly designating their critical intelligence requirements, issuing targeting guidance, and ensuring that the intelligence BOS is synchronized and integrated with the maneuver and FS BOS. Through the IPB, the force G2 participates in laying the foundation for the force HQ targeting and decision-making process, identifying critical enemy nodes in support of close, deep, and rear operations. In turn, the force HQ initiated IPB becomes a primary information source for corps arty, div arty, and lower level G2s/S2s in a two-way flow of information. Force HQ IPBs assist in the preparation and refinement of FA-focused IPBs and FA intelligence estimates and enhance FA survivability and mobility options.

FA-FOCUSED IPB DEVELOPMENT

6-47. The FA-focused IPB is a systematic approach to analyze the impact of the enemy, weather, and terrain on FA operations and to evaluate the enemy's FA capabilities and vulnerabilities. It must be consistent with force IPBs, regardless of whether force and FA CPs are collocated or physically separated. The process is cyclic with all functions performed continuously and simultaneously at each command echelon.

6-48. Every effort must be made to provide FA IPB products to the FA commander and other FA CP staff members to expedite their planning efforts. As resident experts on the employment of enemy FA attack and TA systems, force artillery G2s/S2s must also work closely with force G2s/S2s, FAIOs, FSCs/FSEs, DOCCs, and targeting teams to confirm, deny, or further develop enemy FA intentions. In addition, corps arty and div artys should rapidly pass all relevant IPB products and critical intelligence information developed at their HQ or received from higher or adjacent formations to facilitate the IPB process in subordinate and/or supporting FA brigades and battalions.

6-49. Specific steps taken to develop an IPB in support of a newly received mission normally consists of the following:

6-50. While continuing the IPB process in support of current operations, FA G2s/S2s determine the force artillery's AO/area of interest in coordination with the FA G3/S3. They review higher HQ guidance to determine how the new mission affects current FA intelligence operations. Using existing IPB products and current METT-TC factors, they make an initial assessment of how the new AO will influence friendly and threat FA operations.

6-51. Responding to the FA commander's initial priority information requirements in support of target and situation development, mission analysis, and COA development, they identify gaps in current intelligence holdings. To meet any additional requirements, they consider organic collection assets and

request assistance from higher, lower, and adjacent intelligence agencies, as necessary.

6-52. In a close dialogue with force HQ, FA G2s/S2s obtain and refine force IPB products with focus on FA operational requirements. Included are:

- Enemy mobility corridors.
- MCOOs.
- Imagery and other aerial photography.
- Climatic summary from the staff weather officer.

6-53. With access to such additional information, they now conduct an in-depth evaluation of how the battlefield impacts on friendly and threat FA operations within the designated AO/area of interest to include terrain and weather, the local population, and the enemy's infrastructure. Definition of the enemy's FA OB is followed by an assessment of how the enemy may use his FA assets in support of enemy COAs. In the process, the following FA-relevant overlays and templates are prepared:

- Enemy ground and air avenues of approach affecting FA formations.
- Obstacles and key terrain in support of FA operations.
- Percent of slope or trafficability.
- Vegetation and hydrology.
- Line-of-sight limitations.
- Effect of weather and terrain on trafficability and friendly and enemy FA operational capabilities.
- Direct enemy threat to FA formations and position areas.

6-54. Resulting FA-focused IPB products should be available for passage to the force HQ in time for integration into ACE IPB products before the force HQ mission analysis brief. These products include the following:

- FA-focused combined obstacle overlay.
- FA-focused avenue of approach overlay.
- Intelligence collection and reconnaissance plans to fill information gaps.
- Enemy FA OB, to include type, composition, disposition, and number of FA units, combat readiness, type weapons, munitions, supporting equipment, range capabilities, CSS assets, strengths, and vulnerabilities.
- FA focused doctrinal template, indicating how threat FA assets normally conduct operations under similar circumstances unconstrained by the effects of the environment.
- FA focused SITTEMP, considering the effects of the environment superimposed on the enemy doctrinal template. This information assists in determining the role of FA assets in support of likely enemy COAs to be briefed upon completion of the force HQ mission analysis.

6-55. As IPB development continues, G2s/S2s should expand SITTEMPs into FA-focused event templates, indicating where significant insights gained from an analysis of these templates should be passed to the ACE and force targeting team to assist in the refinement of friendly COAs. The FA IPB database should also serve as the foundation in preparing FA intelligence estimates and the intelligence TAB to the FA support plan. In addition, IPB products should be used to focus the force artillery collection effort to include:

- Positioning and cuing FA TA radars.
- Identification of NAIs to confirm or deny FA operations in support of enemy COAs and projected enemy FA dispositions.
- Identification of characteristics of the environment that influence friendly and threat FA operations.
- Confirming the area of interest for the force artillery.

For detailed IPB information in support of force operations review FM 34-130, *Intelligence Preparation of the Battlefield*.

THE FA COMMANDER'S AND STAFF ESTIMATES

GENERAL

6-56. Estimates are a critical element in arriving at the FA support plan and in sharing and confirming FA-relevant information within the FA CP and with staff elements and commanders in subordinate, higher, and adjacent commands. They provide a logical process for collecting and analyzing information, leading to insights pointing to COAs most suitable for mission success from an FA perspective.

6-57. Estimate development is a dynamic process, normally using the current estimate as a start point for developing the estimate in support of future operations. Estimates must be continuously reviewed and updated as new information becomes available. Critical new information affecting the validity of current estimates should be immediately shared with all affected personnel. Estimates should be as comprehensive as time and circumstances permit and include risk assessments and force protection considerations. Preparation of effective estimates also presumes that all concerned have a clear understanding of the force commander's intent and guidance for fires (two echelons above) and are fully aware of the force artillery's current task organization, weaknesses, and combat readiness. During mission preparation and execution, estimates also serve as a basis to recommend modification of the FA support plan in response to unforeseen contingencies.

6-58. Both the FA commander and coordinating staff officers prepare an estimate. The commander prepares a mental or written estimate, integrating his personal assessment of the situation while continuing to collect and analyze METT-TC factors. In the process, the staff provides the FA commander with additional information and assists him in reaching decisions by preparing staff estimates within their respective fields of interest. They analyze the influence of METT-TC factors on mission accomplishment, consult and coordinate with other FA TOC/ALOC staff members and external agencies to ensure information is relevant and accurate, and present their estimates normally verbally. This provides the FA commander with a more thorough perspective of critical factors affecting the FA mission. FA staff estimates also serve as an information source supporting the development of the FS estimate and FS plan within the force HQ.

TYPES OF ESTIMATES

FA Commander's Estimate

6-59. Upon receipt of a new mission, the FA commander assesses applicable METT-TC factors to include changes in mission, facts, assumptions, and the tactical situation. He draws on FA staff estimates with particular emphasis on the FA G3's/S3's operations estimate. He expands its scope by assessing the intangibles of leadership, training, and morale and uses it as a tool to crosscheck individual staff estimates. He analyzes all available information to include input from subordinate FA commanders, paying special attention to risk factors, FA force protection requirements, and availability of resources. Using the commander's estimate as a frame of reference, he reaches a decision and:

- Provides planning guidance to FA CP staff members and subordinate units.
- Establishes clear and concise CCIR to reduce uncertainties during mission planning, preparation, and execution. His information requirements normally include the status of the enemy's FA capabilities, TTP, and employment options; the impact of weather and terrain conditions on FA operations; and friendly force capabilities.

The Intelligence Estimate

6-60. The FA intelligence estimate analyzes the enemy situation from the perspective of the enemy FA commander within the command's AO. The FA G2/S2 addresses AO characteristics to include weather and terrain in terms of how they might affect the FA mission and friendly and enemy FA formations. In addition, he considers enemy FA vulnerabilities, the feasibility of various friendly COAs, and opportunities for targeting by both direct and indirect fires. The estimate is the result of a detailed and continuous FA-focused IPB process and is updated as IPB products are revised throughout mission planning, preparation, and execution. It should be made available to the commander and other staff members before they complete their own estimates. Maintaining regular contact with G2s/S2s in subordinate, higher, and adjacent commands, the FA-focused intelligence estimate identifies:

- Threat facts and assumptions as they pertain to FA operations (based on the enemy FA OB and doctrinal template). Included are known and suspected enemy FA locations to include committed, reinforcing, supporting, and supported forces.
- Enemy FA strength, capabilities, and vulnerabilities and their impact on the employment of friendly FA fires to include smoke and obscurants, illumination, and SCATMINE.
- The role that hostile artillery is expected to play in support of enemy COAs.
- Probability of adoption of enemy COAs in order of priority from an FA perspective.
- NAIs, TAIs, and decision points from an FA perspective.
- FA targets/target sets to be attacked.
- FA-specific information collection plan requirements.

The Operations Estimate

6-61. The FA operations estimate draws on other FA staff estimates and serves as the FA G3's/S3's principal tool to analyze factors and events within his area of responsibility and their effect on the FA mission and friendly FA formations. It becomes the basis for the FA commander's estimate and the wargaming of force HQ COAs from an FA perspective. Kept current, it provides a timely and accurate evaluation of the AO and friendly and enemy FA units and should lead to recommendations on how to best use available FA resources. As he develops his estimate, the G3/S3 ensures that he has a clear understanding of the following:

- The status of friendly force artillery units to include locations, combat capabilities and readiness, level of training, degree of mobility, equipment limitations, etc.
- Location, status, and mission of adjacent and supporting FA units.
- The FA commander's initial and restated mission and any follow-on changes in mission, facts, and assumptions.
- The effects of weather on enemy and friendly operations to include the use of FA delivery systems, devices, and equipment.
- The effects of terrain on FA operations to include:
 - Observation of indirect FA fires.
 - Cover and concealment.
 - Road movement requirements, position areas, etc.
 - Communications.
 - Avenues of approach and key terrain features relevant to FA operations.
- The enemy situation to include:
 - Composition of FA assets to include unit identity, number, type and caliber of cannons, missiles, and rockets, and type organization.
 - Disposition of enemy FA firing units and C2, TA, and CSS elements to include committed forces and reinforcements.
 - Potential yield and number of enemy nuclear warheads and quantity and type of chemical and biological agents and delivery means.
 - Vulnerability of force artillery units to enemy NBC, terrorist, and unconventional forces attack.
- Recent significant activities affecting FA operations.
- Peculiarities and weaknesses that might influence the combat effectiveness of friendly and enemy FA units.

6-62. Based on available information, the G3/S3 compares friendly and enemy FA capabilities to determine relative FA combat power to include significant strengths and weaknesses. His findings and conclusions are then presented to members of the FA CP staff, FA command group, and the force FSC/FSE in support of mission analysis, COA development, analysis, and selection, and FA/FS plan development.

6-63. The operations estimate initially drives the employment of available FA resources for each COA under consideration by the force HQ. It outlines how to support the scheme of maneuver with FA fires and establishes tentative FA

requirements, responsibilities, and priorities. After COA selection, it drives the development of the FA support plan. Included are:

- Tentative task organization and missions for subordinate FA elements in support of close, deep, and rear operations.
- Availability of FA resources (e.g., cannons, missiles, and TA assets).
- Enemy FA dispositions and intentions.
- Mobility of supporting FA elements in support of offensive and defensive operations.
- Taskings of Firefinder radars.
- Allocation of resources, weapons, and munitions for counterfire operations and corresponding priorities.
- Identification of FA HPTs from the TVA and IPB.
- Availability and condition of roads and likely FA position areas in preparation for movement and allocation of position areas.
- FA ammunition consumption factors, prepositioning requirements, and FA CSS priorities.
- Survey and met requirements and their effect on the delivery of timely and accurate FA fires.
- Reliability and range of communications.
- Time required for positioning FA delivery systems and technical preparation to engage targets.

The Logistic Estimate

6-64. As a summary of LPB, the FA logistic estimate analyzes logistic factors affecting mission accomplishment in the functional areas of supply, transportation, services, and maintenance. It leads to conclusions and recommendations about the logistical feasibility and risks of the various COAs and the effects of each on FA logistic operations. The availability and distribution of ammunition is a major consideration along with Class III (POL). The estimate must be completed in time to permit timely coordination and delivery of supplies.

6-65. Based on information gathered during the LPB and drawn from the other staff estimates, logistic estimates aim to develop a support concept and to determine the logistical feasibility of various COAs and associated risks. Major classes of supply included in the logistic estimate are Class III (POL), Class IV (construction material), Class V (ammunition), Class VII (major end items), and Class IX (repair parts). Estimates should be designed to answer the following questions:

- How much support does the operation need and of what type?
- What CSS resources to include personnel, maintenance support, and transportation assets are organically available or accessible through lateral or higher organizations?
- What is the physical location of these CSS resources and their availability?
- How will these assets get to where they are needed?
- What are the effects of weather and terrain on friendly supply operations, to include road movements, supply and distribution network, and line of communication?

- What are the preferred locations of ammunition supply points and ammunition transfer points?
- What are the potential effects of NBC attacks on FA logistic support activities?
- What is the maintenance status of subordinate, attached, and supporting units?
- What are the shortfalls and negative impacts?
- What COAs can be supported?
- What is the recommended COA?

6-66. Consumption and transportation requirements are a fundamental part of the CSS analysis. Guidance for computing these requirements can be found in the following publications:

- FM 10-13, *Supply and Services Reference Data*.
- FM 55-15, *Transportation Reference Data*.
- FM 55-30, *Army Motor Transport Units and Operations*.
- FM 100-10, *Combat Service Support*.
- FM 101-10-1/2, *Staff Officers' Field Manual: Organizational, Technical, and Logistical Data*.
- TB 55-46-1, *Standard Characteristics for Transportation of Military Vehicles and Other Oversize/Overweight Equipment*.

6-67. During mission analysis and the subsequent COA development and selection process, resources are compared with requirements building on the CSS estimate process. Shortfalls are evaluated in close coordination with operations planners in the FA TOC to determine their effect on COAs under consideration.

6-68. CSS estimates must be completed in time for commanders to confirm the logistical feasibility of the plan, to modify plans and priorities as necessary, or to take calculated risks. Secondly, estimates must be available to advise force G4s/S4s on the estimated consumption levels, type, and distribution of FA ammunition and to coordinate with other logistic agencies to deliver sufficient supplies on time.

The Personnel Estimate

6-69. The personnel estimate analyzes the impact of personnel and administrative factors on individual and unit effectiveness. It permits the commander to draw conclusions concerning troop preparedness, COA feasibility from the FA G1's/S1's viewpoint, and the effect of each COA on personnel operations. Drawing on the commander's guidance and information provided by the IPB and other staff estimates, the G1/S1 determines significant strength and vulnerabilities in his functional area to include:

- Confirmation of the personnel status of subordinate, attached, and supporting units.
- An initial estimate of losses and when and where they are expected to occur (injured, sick, and wounded).
- Identification of FA personnel constraints associated with each COA to include risks affecting the unit mission.

- Transportation requirements within the G1's/S1's functional area during mission preparation and execution.
- Coordination with personnel agencies to ensure transaction of personnel actions on time.

FA FORCE PROJECTION OPERATIONS

6-70. With almost 70 percent of FA units assigned to the National Guard, the projection of sufficient and combat ready FA forces in response to quick reaction contingency operations assumes a new significance. The following are some of the considerations that should be at the forefront of FA CP planning activities upon alert notification. Additional details are provided in Appendix H.

- Type of regional crisis to which the deployment responds and requirements for benign or forcible entry.
- Active component (AC)-reserve component (RC) mix of alerted force artillery formations.
- Results of the FA-focused IPB, based on the latest available information, to include force and FA vulnerabilities and host nation force protection responsibilities and capabilities.
- Identification of CCIR for consideration by the FA commander in support of FA operations in the new AO.
- Compliance with alert, recall, and accountability procedures for force artillery elements in accordance with unit TSOP to include mobilization activities and assistance required by supporting FA National Guard forces to reach combat ready status.
- Required actions to fill personnel and equipment shortages and transportation requirements in close coordination with installation deployment support agencies. This includes identification of requirements for special clothing and equipment and disposition of excess supplies and equipment.
- Priorities for cross-leveling equipment, UBL, FA munitions, and other essential supplies to sustain units during the lodgment and expansion phases.
- FA CP confirmation of the deployment sequence of subordinate FA formations and their flow into the theater of operations based on higher HQ guidance on task organizations.
- Tailoring of FA advance parties and the main body based on type of entry operation, strategic lift, prepositioned assets, availability of intermediate staging bases, and availability of host nation infrastructure assets.
- Determining requirements for additional individual and collective training to reach required mission capabilities consistent with the deployment schedule. This includes assistance for FA RC formations by non-deploying AC FA elements.
- Rehearsing deployment operations and other assigned missions such as reception, staging, onward movement, and integration (RSOI) activities. This includes AO-specific threats, critical individual and collective tasks, ROE, cultural considerations and the dissemination of available information on the enemy, environment, and people.

- Ensuring unit preparations for overseas movement and combat ready certification requirements have been met.
- Coordinating force artillery protection and other support requirements with deployment support agencies at departure and arrival airfields and/or seaports and en route.
- Modifying existing plans in accordance with higher HQ deployment orders and instructions.
- Automation compatibility (e.g., AFATDS-equipped interconnectivity with other digital equipment).
- Implementing the deployment plan at the specified time in accordance with higher HQ movement instructions.

FIELD ARTILLERY ORGANIZATION FOR COMBAT

6-71. The force commander's attack guidance helps determine the FA's organization for combat and FA's role in engaging selected targets. Specific artillery command and control relationships are established by the force HQ in the FS plan based on recommendations by force artillery TOCs: corps arty, div arty, or FA brigade. Organizing available FA assets for combat as described in Chapters 1 and 3 and Appendix C sets the conditions for successful task accomplishment.

6-72. The corps commander may augment the fires of subordinate divisions and the corps covering force by establishing command relationships and assigning FA tactical missions based on prevailing METT-TC requirements. The level of FA fires immediately responsive to deployed divisions and maneuver brigades in defensive operations is influenced by:

- Number of committed divisions and brigades and available FA assets.
- Overall corps FA requirements and availability of other types of FS assets.
- Degree of centralized control over FA assets retained by corps.
- Availability of an FA brigade HQ to serve as force artillery HQ in the security area or main thrust sector, or both.
- Div arty requirements for augmentation to establish additional force artillery HQ. Divisions manning their own covering forces usually require additional FA assets to support both the covering force and MBA elements. When an FA brigade serves as the force artillery HQ for the division covering force, the div arty HQ can concern itself primarily with preparations for MBA defenses.
- Frontages and depth of the corps sector. Similar to extended frontages, depth influences the amount and types of required FA support. Deep sectors often demand the use of long-range weapons or positioning in depth to achieve long-range effects continuously.
- Location of the most vulnerable area (flank or center of division sector).

6-73. In the offense, the availability and capabilities of FA units may determine the suitability of friendly avenues of approach, frontage of the assault, number of objectives to be assaulted simultaneously, number of phases, or whether to attack by day or night.

6-74. Based on above considerations, the corps/division FSCoord, using DFSCoord and FA G3/S3 recommendations, recommends the organization for combat for FA brigades and battalions under corps/division control.

COMMAND POST AND UNIT POSITIONING AND DISPLACEMENTS POSITIONING

6-75. Positioning authority is one of the seven inherent responsibilities within the four standard FA tactical missions (Appendix D). The HQ assigning the tactical mission may withhold positioning authority for all but DS units. The purpose is to retain a higher level of control and facilitate execution of o/o or anticipated future missions. If positioning authority is withheld, the unit has a nonstandard tactical mission. Positions for firing units include CPs, unit trains, and firing positions.

6-76. Positioning will be influenced by the enemy's counterfire, air, and ground attack threat. The objective is to provide uninterrupted FA fires and to survive to support current and future operations. The IPB is an important tool for positioning FA units. FA G2s/S2s must identify high-speed enemy avenues of approach, and G3s/S3s should select positions that do not place batteries, FA CPs, or FA CSS elements astride one of these avenues.

6-77. Suitable CP and firing positions are at a premium in forward sectors where all BOSs are actively competing for available terrain. The enemy's counterfire and air threat also increases FA terrain requirements to support survivability moves. Force FA HQ (corps arty/div arty/FA brigade) nominate FA firing positions and CP locations for units with a GS or GSR mission to force FSCs/FSEs. Approval rests with maneuver commanders in whose sector the proposed locations fall. After coordination with force G3s (or S3s at brigade level), FSCs/FSEs pass approved position areas to corps arty/div arty TOCs for further dissemination to GS and GSR artillery units.

6-78. As the brigade commander's most responsive indirect fire assets, DS artillery and reinforcing artillery units have first and second priority for position assignments in maneuver brigade sectors. Brigade FSCoords in coordination with supported maneuver commanders position them. Third priority within brigade sectors belongs to divisional units with GS and GSR missions. If the fires of a GSR unit reinforce the DS fires of a maneuver brigade, the GSR unit will have positioning priority over GS units.

6-79. Also, units should be positioned in depth to facilitate deep attack and to provide continuous support as units displace. Also, planners should consider:

- Positions that enhance survivability by using terrain or buildings to protect and conceal physical, thermal, and electromagnetic signatures. Alternate and supplementary positions that provide similar survivability advantages should be selected. Positions are preferred that provide cover and concealment, are trafficable regardless of weather conditions, are located near road networks, and are out-of-sight of enemy observation.
- Positions that do not interfere with other unit missions and facilitate future operations.
- Collocation with maneuver units for mutual support and security.

- A2C2 measures to maximize fires to supported maneuver units. This includes positioning FA elements out of the path of minimum risk routes, air axes for cross-FLOT operations, and/or restricted operations zones (ROZs).
- Avoidance of unnecessary FA concentrations to complicate enemy targeting efforts and reduce the effectiveness of enemy fires.
- Positioning FA units in the zone of the supported unit to improve responsiveness and reduce difficulties in coordinating positions and movement routes into the supported unit's area.
- Communications requirements to include retransmission capabilities, if required by distances and terrain to link supporting and supporting units, sensors, adjacent elements, etc.
- Friendly obstacle plans to ensure all obstacles are covered by fire and to ensure emplacement of FA delivered minefields.
- MLRS positioning requirements (see FM 6-60, *Tactics, Techniques, and Procedures for MLRS Operations*).
- Terrain management to include locations of FA radars, movement routes and times, and supply routes.
- FA position overlays that show areas that do or do not require coordination to occupy or that are not available for occupation.

CP DISPLACEMENTS

6-80. Detailed procedures for displacing corps arty, div arty, and FA brigade CPs vary among units based on personnel and equipment available, the tactical situation, and displacement distances. Detailed procedures should be established in unit TSOP and include specific duties of key personnel during displacements and specific procedures for handoff of FA C3. A primary consideration in displacing corps arty, div arty, and FA brigade CPs is the need for continuous and effective C2, even during continuous movement as in a movement to contact. FA CPs must anticipate, plan in detail, rehearse, and quickly execute displacements. CP displacement planning should consider:

- Designation of an alternate CP. An FA brigade in GS can act as alternate corps arty CP, recognizing that FA brigade CPs have neither radios nor personnel to perform this function fully or over an extended period of time. Unit TSOP should provide for establishing and keeping mutual support with other FA HQ.
- Development of a jump CP capability with organic assets to preclude the requirement to establish an alternate CP. This will require personnel, equipment, and vehicles to be relocated in a "jump" configuration. Remaining elements stay operational at their current location until the jump element is in position and ready to assume responsibilities.
- Rehearsals of CP displacements and synchronization in consonance with the scheme of maneuver and expected enemy actions.
- Short-distance survivability displacements to reduce the time the CP is out of action.
- Incorporating CP displacements into the FA movement matrix and integrating artillery units into maneuver march tables.

- Timing displacements so that CPs are in position and operational during critical points of the battle.
- Potential NBC hazards en route to and at new locations.
- Locating CPs in areas that provide extensive cover and concealment, potentially reducing the need to displace.

TARGETING

FORCE HQ TARGETING

6-81. Targeting is the process of selecting targets and matching the appropriate response on the basis of operational requirements and capabilities. Successful targeting enables the force commander to synchronize intelligence, maneuver, FS, and SOF by attacking the right target at the right time with the best mix of attack and sensor systems and munitions. This includes assets from other services and allies. Similar to estimates and the IPB, targeting is a continuous and integral part of the MDMP. The objective is to disrupt, defeat, or destroy enemy functions and facilities that could interfere with the achievement of friendly goals.

6-82. With the force commander responsible for the command's overall targeting effort, these goals are specified in his attack guidance. In addition to the force commander, key staff elements involved in targeting are the members of the targeting team (G3/S3, G2/S2), FAIO, and FSCoord, normally under the supervision of the CofS. Other staff officers, including the ALO, ADA officer, SJA, and engineer, also support the targeting process. They help the commander decide what targets to look for, where the targets are expected to be, who can locate those targets, how they will be attacked, and what effects are required. In addition, they identify assets to be allocated and necessary communications channels for passing information among sensors, shooters, and control elements on a real/near-real-time basis. For a detailed discussion of corps FSC operations and targeting at corps level, see FMs 6-20-30 and 6-20-10.

CORPS ARTY TARGETING

6-83. As indicated in Chapters 2 and 4, corps arty TOCs do not perform targeting functions similar to those by div arty and augmented FA brigade TOC targeting elements. At the corps level, the targeting function is accomplished by the targeting team in the corps main CP. The interface between the force main CP and force artillery HQ is facilitated by positioning corps arty CPs near or with corps main CPs. It permits corps arty TOCs to provide essential input to the force HQ targeting process and facilitates the direct passage of FA targets from FSCs/FSEs/DOCCs to corps arty TOCs for action. In turn, corps arty TOCs pass the target(s) to one or more of the firing units under direct corps arty control; incorporate the target(s) into a fire plan for later engagement; or pass the target(s) to one or more of the div artys.

DIV ARTY AND FA BRIGADE TARGETING

6-84. Div arty and FA brigade TOCs target processing procedures depend on the level of available automation. Although AFATDS and IFSAS process target data automatically, div arty and FA brigade CPs must still be able to process incoming target data manually.

6-85. Manual target processing procedures for units not equipped with AFATDS or IFSAS or for use when computers are non-operative are provided in FM 6-20-1. Manual target processing guards against failure of automated systems and provides the capability to process data quickly and accurately even under degraded, manual conditions. On the other hand, automated target processing greatly enhances FA capabilities to process targeting data and engage targets rapidly. In AFATDS/IFSAS-equipped units, target data is transmitted and processed automatically according to the commander's guidance and TSS. For detailed guidance in support of automated target processing see the current USAFAS Special Text for AFATDS.

6-86. The counterfire officer and S2 perform TA planning. They identify TAIs/NAIs for potential surveillance and FA relevant HPTs and HVTs, review current and future TA requirements, and manage the FA targeting intelligence collection effort. The results are included as a tab to the FA support plan. An example TA plan is shown as part of Appendix G.

FA TA ASSET TASKING

6-87. Normally, corps arty and div arty TOCs control organic and attached FA TA resources such as radars and AFSOs. As noted in Chapter 2, FA assets consist primarily of FA controlled WLRs and survey parties. Artillery G2s/S2s may recommend the insertion of FA TA assets into the force collection plan and recommend radar positions, provide cuing guidance, and other means of operational control. COLTs, Strikers, FISTs, forward observers (FOs), and AFSOs may similarly be tasked for specific information through their respective FSEs. Although maneuver scouts, patrols, and ground surveillance radars may not be classified as TA assets, they can also assist in answering FA information requirements. G2/S2s also coordinate with force FSCs/FSEs/DOCCs and the ACE to obtain information from TA assets not under FA control.

6-88. Div arty and FA brigade targeting activities during mission planning, preparation, and execution are significantly influenced by the two-way flow of information with the force HQ targeting team. Top-down guidance developed by force main CPs as part of the D3A targeting methodology includes:

- Taskings for TA sensors and processing facilities to include FA Firefinder radars.
- Trigger events to cue sensor and attack assets.
- Attack means and method of control to include FA rockets, missiles, and cannons.
- Time of attack and desired target effects.
- Requirements for BDA.

COUNTERFIRE OPERATIONS

CORPS COUNTERFIRES

6-89. Corps counterfire assets include elements of the corps arty, corps aviation brigade, Air Force air interdiction and reconnaissance sorties, Army reconnaissance and attack helicopters, and EW. In some situations, and after careful consideration, corps commanders also may temporarily draw on divisional FA assets to support corps counterfire operations. However, diversion

of limited divisional acquisition, processing, and attack assets entails the risk of their destruction and non-availability to support division operations during critical phases. Equally important is the timing of their return to divisional control, particularly in the heat of battle. The return must be carefully planned and coordinated.

6-90. Corps arty contributions to the overall counterfire effort include the responsibility to:

- Implement the organization for combat of corps arty counterfire assets by retaining FA assets at corps level or allocating them to subordinate divisions in accordance with missions and guidance issued by the corps HQ.
- Supervise preparations and execution of counterfire responsibilities by subordinate corps elements within counterfire sectors of responsibility established concurrently with the designation of maneuver boundaries and AOs for subordinate divisions. This includes targets within a division's or adjacent unit's AO, if requests for such support have been submitted and approved by corps. Within capability, corps may also respond to requests for additional fires from adjacent units.
- Detect multiple rocket launcher battalions, helicopter forward operating bases, and other counterfire targets with FA organic assets, reinforced by collectors from the corps' military intelligence brigade, long-range reconnaissance units, and SOF.
- Attack threat FS systems with MLRS and cannon battalions of corps FA brigades to a range of 30 km (60 km for GMLRS). Beyond 30 km, ATACMS, Army aviation, Air Force sorties, and ground maneuver forces may be available for target attack.
- Recommend the acquisition of additional sensor and attack assets from EAC, the joint task force (JTF) commander, or other services.
- Assess the success of efforts to protect friendly units from threat FS systems. As needed, recommend modifications to intelligence collection and attack priorities to enhance force protection through a more effective attack of enemy counterfire targets.

CORPS COUNTERFIRE IN DIVISION AREAS

6-91. By allocating corps assets, issuing attack guidance, and identifying corps HPTs, corps influence how subordinate divisions fight their counterfire battle. They can shape a division's counterfire effort by attacking threat FS systems in depth, providing MLRS and ATACMS fires, and EW support. Within divisional AOs, corps commanders:

- Define areas of counterfire responsibility by establishing boundaries for subordinate units.
- Provide IPB products and critical intelligence information developed at corps or higher and adjacent HQ.
- Attack targets nominated by the divisions or tasked by corps. Corps, after coordination with division FSEs, may attack threat FS targets within divisional AOs by massing fires to achieve required effects (for example, massing fires to neutralize a reconnaissance strike complex). Also, procedures for attacking threat systems firing across boundaries must be

coordinated. However, in all cases the division must orchestrate and give final approval for all corps fire missions within its AO.

- Provide divisions with additional assets for detecting and attacking threat FS systems.

ROLE OF FA BRIGADES IN CORPS COUNTERFIRE OPERATIONS

6-92. Unless specifically task-organized, FA brigades do not possess organic TA capabilities. If divisions assign reinforcing or attached FA brigades the counterfire role, the division must augment the brigade HQ with acquisition and processing assets in the form of Firefinder radars and div arty targeting personnel. Assignment of the counterfire mission should receive prior corps arty concurrence to ensure availability of the FA brigade to perform the counterfire role for the duration of the operation.

6-93. FA brigades retained to support Corps shaping operations will consist primarily of GMLRS and ATACMS equipped units positioned well forward to take advantage of the range of the systems. FA brigades must ensure that reliable and continuous communications links are available to the launchers to support sensor-to-shooter links.

FA COMMUNICATIONS COMMUNICATIONS NETS

6-94. Reliable communications are central to an unobstructed flow of information and effective battle C2. Effective signal planning increases the commander's options by providing the requisite signal system to pass critical information at decisive times. Appendix I notes the communications assets available to the FA in the form of four communications subsystems for passing information: combat net radio (CNR), area common user system (ACUS), Army data distribution system (ADDS), and the broadcast system. Sample communications architectures for corps arty, FA brigade, and div arty CPs are as indicated in Figures 6-2 and 6-3, respectively. They reflect the communications networks, equipment, and systems described in Appendix I.

6-95. The charts and net descriptions at Appendix I provide a general overview of the various internal and external nets in which corps arty, div arty, and FA brigades operate. The networks matrices indicate which unit elements should be entered in the various networks and at what level of communications (full subscriber, as required). Corps artys and div artys are assumed to be in GS to their supported maneuver commands. FA brigades may be either DS to a maneuver element (maneuver brigade or ACR), R/GSR to a div arty, or in GS to the corps.

COMMUNICATIONS AND ELECTRONICS PLANNING CONSIDERATIONS

6-96. Timely and efficient exchange of information is critical. To ensure an effective flow of information, FA CPs must integrate all available communications assets among supporting and supported CPs, delivery and TA units, and information/intelligence processing centers. In developing the communications plan for a particular mission, commanders and signal officers:

- Analyze the situation.

- Establish communications priorities.
- Allocate organic equipment and request additional support, if needed.
- Publish the communications plan as part of the FA support plan (Appendix G).

FIRE SUPPORT COORDINATING MEASURES

6-97. FSCMs promote the synchronization of FS with maneuver and other BOS and minimize exposure to fratricide. Force commanders employ permissive and restrictive FSCMs to expedite attack of targets; protect forces, populations, critical infrastructure, and sites of religious and cultural significance; deconflict FS operations; and set the stage for future operations. Permissive measures should be placed as close to friendly positions as possible to optimize the employment and effectiveness of all FS means. For example, commanders should place the coordinated fire line (CFL) as close as possible to the FLOT or forward of the lead elements in an attack. The CFL should be consistent with close and deep operations to permit rapid and effective employment of GS and GSR fires and to protect the force. In addition, consider no-fire areas around forward reconnaissance and observation elements such as scouts, COLTs, and FO positions.

6-98. In coordination with superior, subordinate, supporting, and affected commanders, force commanders position and adjust control measures consistent with the location of friendly forces, the concept of operation, and anticipated enemy actions. FSCMs are established by the FSC/FSE during plan development to include consideration of the minimum safe distance of each weapon system. Successive, o/o coordination measures should permit rapid and orderly changes without long delays at critical times. Permissive measures normally require no further detailed coordination for the engagement of targets with conventional means. Restrictive measures impose requirements for specific coordination before engagement of targets. Specific doctrinal FSCMs are discussed in detail in FMs 6-20-30/6-20 and Joint Pub 3-09. In addition, there may exist theater-specific coordination measures to increase responsiveness under selected environments. Examples are the reconnaissance and interdiction planning line (RIPL) in NATO Europe and the deep battle synchronization line (DBSL) in Korea.

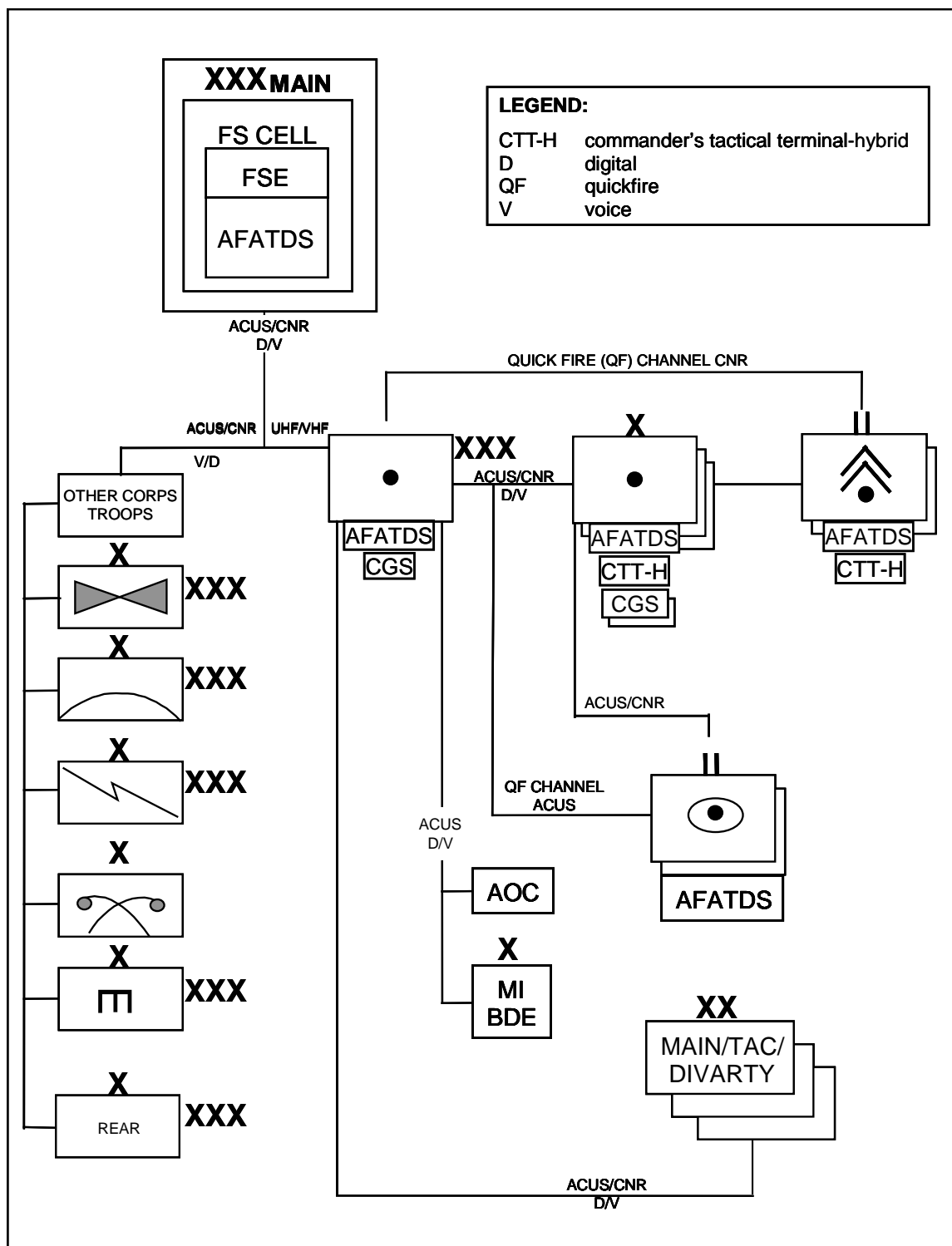


Figure 6-2. Corps Arty to FA Brigade Communications Architecture

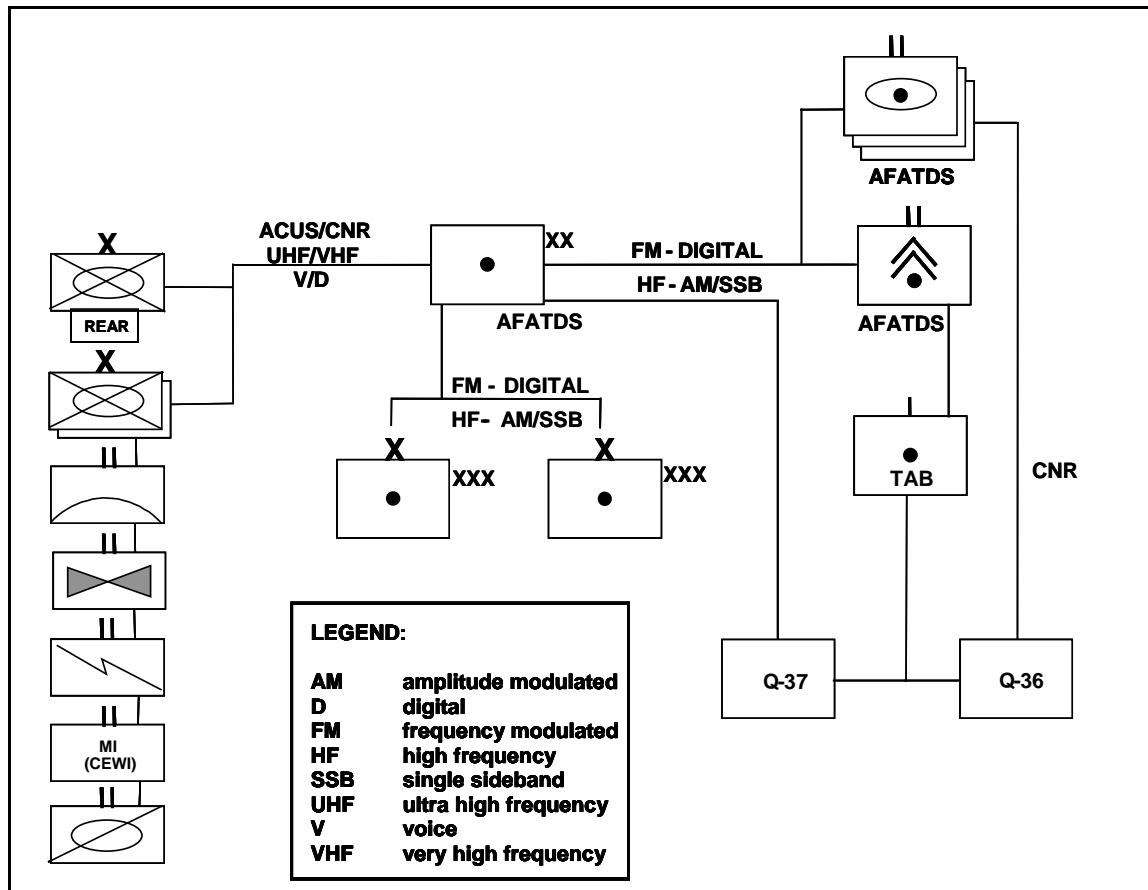


Figure 6-3. Div Arty Communications Architecture

FRATRICIDE PREVENTION AND CLEARANCE OF FIRES

GENERAL

6-99. Fratricide is defined as unforeseen and unintentional death or injury to friendly personnel as a result of employing friendly weapons and munitions with the intent to kill the enemy or destroy his equipment and facilities. Fratricide increases the possibility of mission failure, causes unacceptable loss of personnel and equipment, and erodes leadership effectiveness.

6-100. Minimizing exposure to potential fratricide is a command responsibility. Although the potential for fratricide is greatest during combat when chaos and confusion are at their greatest, it can also occur during training activities and combat simulations. Leaders must be knowledgeable of conditions that cause fratricide and implement fratricide countermeasures regardless of the environment. FA fires must be delivered to meet the commander's intent without inflicting casualties on friendly forces or noncombatants. Efforts must be made to overcome potential hazards such as mistaken identity, navigation errors, or inaccurate or dysfunctional reporting procedures.

6-101. Although weapon systems can detect, engage, and destroy targets at maximum ranges, weapons sighting equipment does not have sufficiently high

resolution of targets at extended ranges, especially under limited visibility conditions. Situational awareness helps overcome this deficiency in part and improve friendly capabilities to positively identify potential targets.

FRATRICIDE COUNTERMEASURES

6-102. Fratricide countermeasures preserve and conserve the force. During the wargaming phase of the MDMP, commanders must identify control measures that can help eliminate or reduce potential fratricide situations. These must be incorporated into orders and plans to subordinate and adjacent commanders. In addition, rehearsals can be used to verify and modify the appropriateness of control measures and to ensure subordinates understand the operation. During execution, FSCs/FSEs/DOCCs and FA TOCs must track the location of friendly elements. This is especially critical during rapidly paced advances such as during attacks, exploitations, or pursuits. Specifics include:

- Individual errors are as simple as mistaken identity. If there is a possibility that enemy and friendly forces are intermixed in the target area, units must positively verify their identity after detection prior to engagement. Weapons errors include lapses in unit and individual discipline that allow powder-charge errors, accidental discharges, incorrect gun data, and similar incidents. Unit errors include errors in the use of weapons-engagement areas or sectors or in using fire control measures.
- Strict adherence to procedural control measures such as permissive and restrictive maneuver and FSCMs. Fratricides can occur when FSCMs are not used, not disseminated, not tied to recognizable terrain features, or unknown.
- Dissemination and receipt of warnings and reports in sufficient time to allow for appropriate actions and synchronization.
- Preclusion of land navigation errors to prevent units from straying out of sector, reporting wrong locations, becoming disoriented, or unknowingly engaging targets out of sector.
- Adequate unit-leader experience. Ensure that junior leaders have the opportunity to gain the necessary experience and judgment to make rapid decisions under ambiguous, stressful conditions. Crews must be properly trained to increase the likelihood that they will not engage friendly forces.
- Special caution during periods of limited daytime visibility and at night.
- Judicious use of materiel solutions, using active and passive measures to provide friendly forces a unique signature to distinguish friend from foe. These may include marking devices and combat vehicle identification systems such as thermal beacons, thermal tape, and navigational aids.

CLEARANCE OF FIRES

6-103. The scheme of fires must also provide for clearance of fires. Clearance of fires ensures that fires attack enemy capabilities at the time, place, and with the effects the commander desires without resulting in casualties to friendly forces or noncombatants. It may be accomplished through a staff process and control measures, embedded in automated battle command systems, or through passive or active recognition systems. It remains a command responsibility at every level. General clearance of fires responsibilities are shown in Table 6-1.

Table 6-1. Clearance of Fires Responsibilities

Position	Responsibility
Maneuver Commander	<ul style="list-style-type: none"> • Clears fires. Normally this is delegated to their CP and executed by the battle staff under the lead of the FSE.
FSCoord	<ul style="list-style-type: none"> • Recommends clearance of fires guidelines to the commander.
FSE/FCE	<ul style="list-style-type: none"> • Ensures friendly force safety through adherence to ROE, FSCMs and maneuver control measures. Use maneuver control measures and FSCMs to facilitate clearance of fires. • Coordinate for clearance of fires across boundaries as required. • Use automated systems to request clearance of fires. • Warn controlling HQs if FSCMs or commander's attack guidance is about to be violated. • Use rehearsals to validate responsibilities for clearance of fires.

6-104. During the planning process, staff officers must consider how to position sensors not only to gather intelligence but also to support information requirements that will assist in assessment and the clearance of fires. Although sensor placement may primarily focus on gathering enemy information, information collected on friendly forces is equally important.

6-105. Force FSEs coordinate clearance of fires with the maneuver commander. Digital systems are expected to enhance the accuracy and timeliness of situation reporting and significantly contribute to improved situational awareness. It will permit commanders and staff officers to see the battlefield more clearly and to employ positive control measures more efficiently.

6-106. Clear and understandable maneuver control measures are also a significant first step in the clearance of fires. Again, digital systems will enhance the accurate and rapid transmission of these measures. FSCMs not only assist in the integration of fires by facilitating the rapid engagement of targets. They also safeguard friendly forces.

6-107. Permissive measures (if positioned correctly and disseminated to all higher, adjacent and subordinate units), such as CFLs and free fire areas, offer the opportunity for safe responsive fires on targets of opportunity. The size of restrictive measures (no fire areas, restrictive fire areas [RFAs]) should be verified to preclude unwarranted delays for otherwise safe fires.

6-108. A procedure to consider in certain circumstances is pre-clearing fires. In some very specific instances, units can clear fires during the planning phase. Two such instances are: (1) fires into a planned CFFZ resulting from a radar acquisition from that planned CFFZ - the CFFZ must have been planned in advance and published in the radar deployment order (RDO); and (2) fires on a preplanned target, with a definable trigger, against a specific enemy, and according to the scheme of FS.

6-109. When fires are requested that are not pre-cleared or allowed by a permissive FSCM, they must be positively cleared. This procedure should be a

battle drill in CPs. The best method is a redundant drill where a call for clearance is transmitted over two nets, the FS net and the maneuver net.

6-110. Positive clearance of fires is normally facilitated through prior planning, rehearsals, and careful placement of FSCMs. However, the clearance of targets of opportunity often presents special challenges. They must be delivered on short notice without undue delay in responsiveness and without jeopardizing friendly force security. For positive clearance of fires, the following should be obtained:

- Best available method of target location.
- Positive identification of targets as enemy.
- “Eyes on target,” if at all possible.
- Clearance from appropriate external elements if target is outside unit boundaries.

ATACMS DECONFLICTION

6-111. ATACMS unlike other munitions requires additional coordination and deconfliction before the missions may be fired. The FA HQ (corps arty, div arty or FA brigade) must be aware of these extra responsibilities when firing ATACMS. There are different procedures used for planned or immediate missions. The artillery headquarters will be required to provide launcher locations for both planned and immediate missions. Launcher locations will be used by the A2C2 elements to request ROZs from the airspace control authority to restrict air operations over the launch areas. Similarly ROZs can be used over predicted ATACMS impact locations. These locations can be determined by the launcher and are identified as the position area hazard (PAH) and target area hazard (TAH). For more detailed information concerning ATACMS deconfliction see FM 3-100.2 (100-103-1), *Multiservice Procedures for Integrated Combat Airspace Command and Control*. The agencies involved in deconflicting ATACMS firings are:

- Corps FSE notifies the corps A2C2 element and ASOC of planned or immediate ATACMS missions.
- Corps A2C2 element deconflicts airspace over the corps area and notifies the BCD.
- BCD deconflicts the ATACMS launches with the joint air operations center (JAOC).
- ASOC determines if CAS aircraft are clear. If not, it clears the aircraft using any means at its disposal.
- JAOC determines if all other aircraft are clear. If not, it clears the aircraft using any means at its disposal.

COMBAT SERVICE SUPPORT PLANNING PROCEDURES

GENERAL

6-112. FA CSS capabilities and requirements are a function of the command's overall organization for combat, unit tactical missions, battlefield dispositions, and COSCOM augmentation of DISCOM capabilities. The responsiveness and effectiveness of CSS will also be affected by the dynamic nature of FA operations. Changing tactical missions and/or command relationships may

frequently reposition corps arty formations and shift CSS responsibilities to different DSAs/BSAs.

6-113. FA G4s/S4s play a significant role in this process by anticipating future requirements and having CSS staffs participate in the planning process from start to finish. They must ensure that all phases of an operation are logistically supportable. However, prior planning and the establishment of priorities are insufficient unless accompanied by aggressive follow-through during execution.

LOGISTIC PREPARATION OF THE BATTLEFIELD

General

6-114. The FA LPB process is intended to identify and assess factors that facilitate, inhibit, or deny support to FA units and to enhance the survivability of CSS assets. It involves the use of IPB products; personnel, supply, and movement planning factors; and planning guidelines. The goal is to determine FA CSS requirements to support the FA support plan by developing logistic estimates and feasible concepts of support. It is a coordinated effort that involves the following steps:

- Determine information requirements to support required actions.
- Determine sources from which raw information can be derived and collect relevant data.
- Analyze collected information and assess its impact on the mission and competing COAs.
- Integrate this information into logistic estimates, the admin-log tab, and FA plans and orders.

LPB Information Sources

6-115. Sources, which can provide relevant data in support of the LPB process, include:

- Higher HQ briefings, plans, and orders.
- Commander's planning guidance.
- Commander's intent.
- Operations and intelligence briefings and overlays.
- MTOEs, status reports, and route reconnaissance overlays.
- Traffic circulation and highway regulation plans.

LPB METT-TC Considerations

6-116. Throughout the LPB process, CSS personnel must be guided by METT-TC considerations to gain the necessary situational awareness. FA CSS METT-TC considerations include the following:

- *Mission.* The mission of CSS personnel is to provide subordinate FA units with assets required to achieve assigned tasks. To provide effective support, FA ALOC personnel must clearly understand the force commander's intent, concept of operations, and scheme of fires. They must know the mission of each supported element, execution times, and current and proposed unit locations. Corps arty and div arty CSS personnel must aggressively anticipate changing support requirements for subordinate, nondivisional FA

brigades and battalions because of frequent changes in tactical missions and operating environments across the corps front. This is essential for timely coordination with CSBs/CSGs, MSBs/FSBs, or COSCOM/DISCOM staffs to shift logistical support assets and responsibilities responsively.

- *Enemy.* Special attention must be paid to the potential impact of enemy actions against friendly CSS capabilities. CSS facilities are easy to detect, limited in mobility, and difficult to protect. Aside from prudent actions to preclude or alleviate disruptions, key CSS assets should be identified and provided an appropriate level of protection. IPB can help identify the vulnerability of plans and forward and rear area CSS sites to enemy action.
- *Troops and support available.* CSS personnel must have a clear understanding of internal and external support assets to include their availability. They significantly affect the feasibility of tactical operations and supporting activities. For example, to plan and coordinate future missions, corps arty and div arty CSS staff members must know the current and projected location, organization, and capabilities of CSGs/CSBs and MSBs/FSBs. This is essential for the efficient transfer of CSS responsibilities between support areas as FA formations are relocated.
- *Terrain and weather.* Terrain and weather will influence the level and type of support required and the manner in which it is provided. For example, snow, rain, and rough terrain slow down CSS activities.
- *Time available.* Experience shows that time available to plan, prepare, and execute CSS operations at the tactical level progressively decreases as one moves down the organizational ladder. Time available to react to mission requirements must be carefully evaluated since it impacts greatly on resource availability and the suitability of supply methods.
- *Civil considerations.* CSS personnel must be cognizant of civilian populace concentrations and their impact on route control and transporting supplies.

Admin-Log Plan Preparation

6-117. To develop and execute sound plans, CSS personnel must achieve and maintain a high degree of situational awareness and initiate actions well before the start of operations they are designed to support. To achieve the required degree of awareness, CSS personnel must gain timely access to accurate information about all factors that influence support requirements and CSS operations during the LPB and logistic estimate processes. Careful management of the information flow demands that information requirements be clearly identified early in the process, vigorously pursued, and shared with all who require access.

6-118. The product of the CSS planning effort should be an admin-log plan that is precise, addressing only deviations from routine procedures established in unit SOP. See Appendix G for an example plan.

FA CSS OFFENSIVE PLANNING CONSIDERATIONS

6-119. The CSS system must do its part to ensure that the offensive momentum is maintained. This can be accomplished by establishing necessary priorities and a flow of supplies and services sufficient to sustain the forward thrust. If the enemy is given an opportunity to recover from the shock of the initial assaults, he may regain the initiative and mount successful counterattacks. For

example, if initial attacks are successful, CSS planners must be sufficiently flexible to support an exploitation or a pursuit. Simultaneously they must consider that changing from one type of offensive operation to another may require major shifts in CSS priorities and support requirements.

6-120. The following FA CSS offensive planning considerations apply to some degree to all offensive operations:

- Focus on weighing the main effort and the resupply of critical items such as fuel and FA ammunition and the provision of medical and maintenance support.
- Position essential CSS assets such as FA ammunition, POL, and maintenance well forward in combat trains and ensure that basic loads remain replenished. If preparations or other large-scale fires are planned to support the initial phase of the attack, consider prestocking firing batteries with ammunition for immediate consumption. At division-level, include requirements for nondivisional R and GSR artillery when positioning CSS assets (for example, ammunition transfer and supply points). Coordinate with CSGs and divisional FSBs and/or MSB elements.
- Anticipate a disruption of resupply during movement to contact. Units should carry sufficient supplies on tactical vehicles to support them through the movement to contact and ensuing battle. Plans should consider the location and access to corps and division CSS assets prepositioned forward to include refuel-on-the-move options and recovery of equipment.
- Establish maintenance priorities on the basis of the commander's guidance and METT-TC factors. Nondivisional artillery must be integrated into the overall maintenance priorities for the attacking force. Priorities may change as offensive phases are completed.
- Plan for increased consumption of POL.
- Push forward preconfigured LOGPAC of essential CSS items. Examples are Class I (water), Class III (bulk and packaged POL), and Class VI (personal demand items). Consider reinforcing corps arty units when designing preconfigured divisional LOGPACs.
- Plan for increased vehicular maintenance, especially over rough terrain or during extreme environmental conditions.
- Make maximum use of unit maintenance personnel and MSTs in forward areas.
- Request unit distribution at forward locations.
- Determine availability and location of major assembly stocks.
- Increase use of meals, ready to eat.
- Use captured enemy supplies and equipment; particularly support vehicles and POL, per command guidance. Before use, test for contamination, tampering, or booby-traps.
- Suspend most field service functions except GRREG and air drops.
- Prepare for increased casualties and additional evacuation requirements.
- Select supply routes, logistics release points (LRPs), and subsequent trains locations on the basis of map reconnaissance.
- Plan and coordinate EPW operations; expect more EPWs.

- Plan replacement operations on the basis of known and projected losses.
- Consider increasing distances and longer travel times to ASPs and ATPs.

FA CSS DEFENSIVE PLANNING CONSIDERATIONS

6-121. As operations shift towards the defense, FA logistical elements should begin to minimize the amount of support forward in the MBA. Corps arty and FA brigade CSS staffs will be primarily concerned with providing needed support to FA battalions engaged in corps-level operations and to divisions in whose area the main enemy effort is expected. Although limited support may be provided by DISCOMs, most support must be coordinated with CSGs. At div arty level, logistical planning involves forecasting and consolidating requirements and coordinating the required support with division G4s and the DISCOM staff.

6-122. FA CSS planning in the defense should consider the following:

- Ammunition availability. Maximize organic haul capability and minimize requirements for resupply. Preposition additional ammunition and plan and coordinate cache sites for limited amounts of ammunition in convenient locations along anticipated routes of withdrawal. Make plans to destroy these stocks, if necessary.
- CCLs. Adjust established CCLs to meet mission requirements, if necessary. For example, if the FA support plan calls for increased use of artillery-delivered smoke, the Class V CCL must be adjusted to provide additional smoke munitions. This may also require a decision on what type of rounds to reduce to accommodate increased smoke allocations.
- ALOC. Displace ALOCs to the rear before the MBA battle is joined to facilitate coordination with DISCOM and CSG elements.
- Location of logistical support units. Coordinate for equipment repair forward or evacuation to the rear as required.
- Prepositioning limited amounts of POL in convenient locations along anticipated routes of withdrawal. Make plans to destroy these stocks, if necessary.
- Reorganization or regeneration of lost CSS capabilities.
- Additional requirements for obtaining and moving Class IV barrier material.
- EPW, casualty, and maintenance collection points and evacuation requirements.

FA CSS HEAVY-LIGHT-HEAVY FORCE MIXES PLANNING CONSIDERATIONS

6-123. Whenever mixing SP artillery with towed artillery from light units, consider the unique operational requirements of each. Protection and survivability, mobility, terrain requirements, liaison, and CSS require detailed analysis and planning. Planners in a light division must remember that a heavy FA unit can move faster and requires more operating space than other elements in a light division. Also, operating procedures of heavy forces are different from those found in light formations.

6-124. Heavy-light or light-heavy force mixes make CSS arrangements especially challenging. When a heavy FA brigade supports a light division,

planners must consider that light division DISCOMs have little, if any, ability to provide the necessary support for heavy FA battalions (primarily Classes III, V, and IX). Even with COSCOM augmentation, light divisions have no tracked vehicles and insufficient means to assist a reinforcing SP artillery battalion or brigade to maintain and sustain itself. In such situations, heavy FA units must be accompanied by mission- and/or unit-specific CSS augmentation packages when arriving in the light division's sector. This includes POL, ammunition, and maintenance support with necessary repair parts, recovery, and lift capabilities. Similarly, a light artillery force supporting a heavy force requires unique support not normally provided by the heavy force. The heavy division must request and provide ammunition (105mm) it does not normally carry. Class III consumption rates, engineer support, and transportation augmentation are also necessary considerations.

6-125. Class IX supplies and maintenance can also present unique CSS planning requirements. For example, a heavy division DISCOM does not have the ASL or maintenance personnel to support 105mm FA howitzer units. As FA battalions move from one brigade or division sector to another, gaining support battalions may require augmentation from losing support battalions to include ASL push packages and additional MSTs. Habitually associated MSTs can facilitate this process. Also, COSCOM transportation assistance may be required to move ASLs from losing to gaining support units.

CLASS V PLANNING CONSIDERATIONS

6-126. Planning Class V requirements and distribution is of particular importance as the largest and most time-sensitive FA CSS task. It consists of determining and establishing required and controlled supply rates, basic loads, ammunition for immediate expenditure, and resupply procedures to sustain the force. Planners must consider that each division forward ATP is normally only capable of handling munitions for one maneuver brigade and its DS artillery battalion. Conversely, rear ATPs, with collocated lift and transload assets, have the required capabilities to manage the high volume and tonnage of corps arty cannon and MLRS munitions. However, with corps arty battalions frequently located forward in brigade sectors in accordance with corps and division battle plans, these essential assets may be out-of-sector. Therefore, CSS staffs must not only position ATPs to support the maneuver plan, but also identify additional COSCOM augmentation assets to support divisional ATPs, if they are to service one or more corps arty battalions (e.g., personnel, material handling equipment, and transportation assets).

6-127. To streamline ammunition transfer operations and make them responsive to unit requests in consonance with current and future mission requirements, commands should also consider establishing CCLs. For example, CCLs transported to a forward ATP may have varying mixes of complete rounds of DPICM, HE, and FASCAM for 155mm howitzer units. CCLs transported to rear ATPs may have varying mixes of complete rounds and rockets and missiles for cannon and MLRS/ATACMS units. If a CCL meets most of the requirements of the requesting unit, it is sent without further handling. (For more information on CCLs, see Chapter 5.)

SURVEY OPERATIONS

6-128. Timely survey operations are essential for the effective massing of fires and first-round fire for effect. All echelons within a corps must coordinate and synchronize their survey plans to ensure that common survey control can be provided to all FA firing and target acquisition units. Grid commonality is desirable with adjacent corps, especially in coalition operations.

6-129. Survey, planning, and coordination originate at the corps SPCE, which is directed by the survey, planning, and coordination officer (SPCO). The SPCE ensures synchronization among topographic engineers, div artys, and nondivisional units and/or systems requiring common control. Coordination and planning by div arty SPCEs are the responsibility of the div arty survey officer who coordinates div arty survey plans with battalion reconnaissance and survey officers (RSOs). FA brigade SPCEs plan and coordinate the interface of internal survey requirements with corps or division SPCEs. Aggressive survey planning that answers who, when, why, and how is essential for success.

6-130. Survey planning must fully consider the following when establishing survey requirements for sensor and attack systems:

- Commander's concept.
- Survey priorities.
- Tactical situation.
- Survey control available.
- Desired accuracy.
- Number of required installations.

Detailed information on survey operations is provided in FM 6-2.

METEOROLOGICAL OPERATIONS

6-131. Current met data must be applied for the delivery of accurate artillery fires, battlefield forecasts, and target acquisition. These data are provided in the form of met messages by FA met sections. During planning, consideration must be given to:

- Commander's concept.
- Mission priorities (type of met data required).
- Tactical situation and security.
- Prevailing winds (they influence met section location).
- Location of supported units.
- Location of other met sections.
- Communications capabilities.

6-132. Corps arty met support coordination and planning begin with the corps arty operations officer. Div arty and FA brigade S3s coordinate positioning and displacement of met sections to ensure continuous met support. This calls for met sections to be located where atmospheric soundings best meet the needs of the supported force. FM 6-15 provides detailed information on met operations.

TARGET ACQUISITION RADAR OPERATIONS

6-133. All collection assets available to the commander must be maximized to support the TA effort. Commanders must consider the vulnerability of FA TA assets and optimize their location by considering threat direction-finding capabilities and enemy artillery ranges.

6-134. AN/TPQ-37 radar sections within CTADs are usually retained under corps arty control with information passed directly to corps targeting elements. The complementary nature of coverage offered by AN/TPQ-37 and AN/TPQ-36 radars leads to a certain degree of centralized control in heavy divisions. (Note: No organic radars at div arty level in airborne, airmobile, and light infantry divisions.) Inherent in the superior-subordinate relationship, div artys normally retain authority to establish, either directly or through a subordinate HQ, the specific zone of coverage for sectors of search and general position areas. The intent is to ensure responsive coverage for the entire division with limited, organic resources.

6-135. AN/TPQ-36 radar sections in heavy divisions may be attached or assigned to DS battalions for administrative and logistical support. When assigned, the radar is considered an integral part of the DS battalion's support package to the maneuver brigade. When attached, the DS battalion may further subattach the section to a subordinate firing battery for security and logistical support. In either case, div arty, or a reinforcing FA brigade HQ with a counterfire mission, provides guidance on positioning and sectors of search. Radar sections organic or assigned to FA battalions in separate brigades or infantry divisions are employed as directed by the FA battalion commander. If a separate maneuver brigade is attached to a heavy division, organic radars remain associated with their parent unit. However, div arty controls their operations in the same manner as divisional radars.

6-136. Centralized control of the Firefinder radars can lead to duplications and an overwhelming volume of targets to be processed. An effective method of reducing the duplication of targets to be processed is the establishment of a common sensor boundary (CSB) for CFFZs. The CSB is a line established by the div arty or FA brigade that divides the target acquisition area into close and deep areas for the AN/TPQ-36 and AN/TPQ-37 radars, respectively. Each radar would be limited to CFFZs on their respective side of the CSB thus eliminating duplications resulting from overlapping acquisition ranges. For additional details on field artillery target acquisition see FM 6-121.

ALTERNATE COMMAND POST CAPABILITIES

6-137. As previously noted, neither corps nor divisions have a subordinate CP fully capable of assuming the functions of the main CP; however, individual, subordinate CPs may be suitably staffed, equipped, and trained to assume responsibility for selective force main CP functions. Potentially effective arrangements for a transfer of main CP functions at division level are shown in the example in Table 6-2.

Table 6-2. Example CP Functions and Designated Alternate

Main CP Function	Designated Alternate
Command Center	Aviation Brigade
G3 Ops/Planning/A2C2	Aviation Brigade
G2 Ops/ASOS	MI Battalion
FSE	Corps Arty/Div Arty
Engineer	Engineer Battalion Staff
ADA	ADA Battalion
NBC Element	Division Chemical Company
Assistant Division Signal Officer	Signal Battalion
G1/G4	DISCOM

SECTION IV - MISSION PREPARATION PHASE

GENERAL

6-138. In both offense and defense, perhaps the most critical stage is the preparation phase focused on directing and influencing the transition from planning to execution. Necessary supporting coordination and synchronization measures must be initiated in the planning phase to preclude major changes during preparation prior to execution. Also, to keep unit efforts focused on mission accomplishment after FA support plan completion, the staff must provide the commander information in the quantity and quality necessary to see the battlefield accurately and track battle preparations.

6-139. Under the FA commander's general supervision, FA elements complete their task organization and deploy in support of close, deep, and rear operations. Necessary combat, CS, and CSS assets are made available on time and in the required quantities and locations before mission execution. Subordinate unit reporting must be consistent and qualitatively acceptable.

VALIDITY CHECKS

6-140. By positioning himself effectively on the battlefield and retaining the ability to communicate with FA and force CPs, the FA commander provides command presence at critical times and places and maintains the currency of his CCIR and estimate. In addition, he conducts visits and inspections of subordinate units as appropriate and monitors the implementation of FA survivability measures.

6-141. In transforming the FA support plan into action, the FA staff must periodically conduct validity checks to ensure the FA support plan remains applicable to the current situation. Validity checks prepare the commander and staff for battle and ensure that they can respond to changes in a flexible manner. If checks confirm the original decisions, the command proceeds with implementation. If not, the commander reassesses the situation based on the latest available information and approves the issuance of WARNOs/FRAGOs as necessary. Validity checks should:

- Confirm the FA-focused IPB and the FA commander's and staff's estimates, and ensure subordinate unit reports are provided consistently and are of acceptable quality.
- Include a personal terrain analysis.
- Assess the impact of current battlefield conditions on future FA operations.
- Monitor preparations of the battlefield to include activities by the FA CP staff, supporting troops, and subordinate leaders such as:
 - Sharing results of reconnaissance and TA efforts. Refine target locations and ensure continued compliance with the force commander's attack criteria. Attend targeting meetings at force HQ and assure a responsive flow of information over established communications channels with higher HQ (FSC/FSE/FAIO, COSCOM/DISCOM, etc.). In the process validate HPTLs, AGM, and any changes to HVTs.
 - Confirming satisfactory progress of force artillery reorganizations, movements, and maintenance and resupply activities. Ensure FA attack, TA, and CSS assets are positioned to support the upcoming battle.
 - Continuing synchronization and coordination efforts initiated during the planning phase.
 - Ensuring all digital systems are updated, targets and FSCM are plotted, and information is expeditiously disseminated to the appropriate levels.
 - Enhancing survivability of FA elements through advantageous positioning, coordination with adjoining maneuver units, and availability of dedicated security or on-call reaction forces.
 - Establishing necessary communications links among detection systems, decision-makers, and delivery systems to expedite engagement of HPTs.
 - Confirming or adjusting friendly and projected enemy FA actions within selected COA(s). Expeditiously update and adjust FA-focused IPB products to include CCIR, enemy OB/doctrinal template, situation event and decision support templates, obstacle overlays, and collection and surveillance plans.
 - Refining FSCMs and positive fire clearance processes to facilitate firing across boundaries. Minimize fratricide potential through detailed coordination and confirm unit awareness of relevant ROE and identification-friend or foe procedures.
 - Establishing liaison with subordinate, supported, and allied elements as required by FA mission assignments or specific instructions in OPORDs.
 - Supervising modifications to the approved FA support plan based on the evolving tactical situation and monitoring their implementation.

FORCE PROTECTION

6-142. During mission preparation, force commanders must ensure adequate security for forward FA assets as they engage the enemy and protect the force at large. Primary FA threats to friendly FA elements will normally be enemy counterfire and air and ground attacks. Force protection options include:

- Dedicated/designated maneuver elements to provide adequate security for MLRS launchers and Firefinder radars, especially in case of significant ground and air threats when dispersion is advisable.
- Clustering of MLRS launchers for self-protection during periods of increased ground threat.
- Improved “shoot and scoot” techniques.
- Closer proximity to maneuver elements.
- Engineer assets to provide survivability and mobility for radars and FA delivery assets.

6-143. The MDMP is the initial point to apportion force protection assets for FA units and systems. This will allow the entire staff to be involved in how it affects the mission. When possible units should standardize force protection packages for planning purposes (see the example in Table 6-3). Additionally, these attachments must be listed in coordinating instructions and specific tasks to subordinate units, not simply Annex D, for clarity and adherence to survivability standards.

Table 6-3. Example Force Protection Packages

Equipment	Force Protection Requirement	Unit Tasked
Q36 Radar	1 Infantry Squad per radar (with transportation)	Supported Maneuver Brigade
Q37 Radar	1 Infantry Squad per radar (with transportation)	1-29 Infantry Division (Light) ID(L)(-)
MLRS	1 Mechanized Platoon per battalion	3d Brigade Combat Team (BCT)
Class V Cache	1 Infantry Squad per cache point	1-29 ID(L)(-)

TARGET TRACKING

6-144. As part of the detect function of the D3A methodology, FA G2/S2s are responsible for monitoring that the targeting process remains focused on assigned FA targets and that adequate assets are allocated to collect the necessary information for attack. Competition for assets is intense. Refinement of targets, based on updated intelligence, reconnaissance, etc., is an essential part of the preparation phase. Determining whether TSS have been met is essential before targets can be attacked.

LOGISTIC PREPARATIONS

6-145. CSS personnel must ensure that CSS preparations do not compromise tactical plans. This includes prepositioning ammunition and POL in convenient locations along anticipated routes of withdrawal or advance, accompanied by plans for their destruction, if required. Resupply should preferably occur during periods of limited visibility to reduce chances of enemy interference. Since ammunition availability will drive the number and type of targets that can be engaged, the commander and staff should closely check the movement, positioning, and protection of FA CSS assets.

REHEARSALS AND BACK BRIEFS

GENERAL

6-146. Successful execution of an operation depends greatly on participants being familiar with all relevant aspects of the OPLAN/OPORD and their ability to identify and correct problems and weaknesses prior to the start of combat operations. Combined arms and FA tactical and digital rehearsals and back briefs are, therefore, critical to the success of both offensive and defensive operations. They should include the “who, what, when, and where” of how FA support is provided. Rehearsal participation of all key individual players and agencies should be mandatory and rehearsal planning, initiated during the planning phase, should make allowance for time required for organizing and conducting rehearsals. To use rehearsals efficiently and effectively in combat, commanders must habitually use them in training with rehearsal techniques and standards clearly established in unit TSOP.

COMBINED ARMS AND FA TACTICAL REHEARSALS

6-147. Rehearsals may take a variety of forms: terrain walks; terrain boards; map rehearsal; radio rehearsal; rock drills; key-leader rehearsal; full rehearsal; etc. Whatever the form of combined arms rehearsals, FA operations must be integrated and synchronized with those of the other members of the FS system, with maneuver units, and with other BOS. During FA tactical rehearsals, the following portions of the FA plan should be rehearsed as a minimum: FA synchronization matrix; FA movement matrix; FA communications structure; reconnaissance and survey plans; schedule of fires; fire plan; logistic support; measures to prevent fratricide and collateral damage; and contingency and on-order missions. Rehearsals should use the most thorough technique possible within the time available. For an overview of preparations and techniques for conducting FA tactical rehearsals see Appendix J.

FA DIGITAL REHEARSALS

6-148. In addition to combined arms/FA tactical rehearsals, digital rehearsals have gained in prominence with the introduction of AFATDS. Their purpose is to verify the digital database and guarantee that AFATDS and other digital systems provide consistently accurate results. They also help validate the time-space relationships of EFATs. For further details see Appendix J.

BACK BRIEFS AND CONFIRMATION BRIEFS

6-149. Rehearsals may incorporate back briefs to assist in the identification and resolution of potential problems prior to execution; however, back briefs do not substitute for either rehearsals or coordination. They are primarily a commander’s tool to increase understanding and synchronization through the passage of information.

6-150. During the back brief, each subordinate commander briefs the commander on how he intends to accomplish his mission before he issues his plan to his unit. By briefing and explaining his intent and concept of operations to his higher commander, the higher commander can ensure that his subordinate commander’s approach is in harmony with his own. Flaws or potential problems with the operation may also be revealed at this time.

6-151. Back briefs should not be confused with confirmation briefs that commanders use immediately after issuing a plan to determine how well a subordinate commander understands the mission, task, or directive he has just been given. The commander normally requires subordinate commanders to restate what he wants them to do and why. Typically, the confirmation brief occurs at the conclusion of the orders or OPLAN brief when all subordinate commanders are present. The commander adjourns the session only when he is confident his subordinates understand their mission, his and his higher commander's intent, the concept of operation, scheme of maneuver, priorities, the time plan, and type and location of rehearsals.

SECTION V - MISSION EXECUTION PHASE

GENERAL

6-152. Once execution begins, flexibility, resulting from detailed contingency planning and full situational understanding, should facilitate rapid and effective responses to the unexpected. FA commanders, regardless of their location on the battlefield, must provide timely direction and guidance to their staff and subordinate commanders, assuring themselves that subordinate elements are capable of executing the FA support plan. If communications are interrupted, subordinates must act without active supervision, using their best judgment and understanding of the commander's guidance for the delivery of FA fires and adhere to the five fundamentals for employing FA fires in combat. Generally, commanders should restrict their subordinates' freedom of action only to enhance synchronization and minimize exposure to fratricide. Command presence and visibility will continue to be a critical factor throughout execution with the position of the commander influenced by METT-TC conditions and available communications.

INFORMATION EXCHANGE

6-153. During execution, situation updates, WARNOs, and FRAGOs are used to pass CCIR and other intelligence information rapidly. It is crucial to the successful completion of the deliver function of the D3A targeting methodology. Communications channels should provide for redundancy to enhance survivability and ensure receipt of critical transmissions. Feedback and reports by subordinates should be continuous and rapid to expedite decisions and adjustments during battle, based on validation or adjustments of facts, assumptions, CCIR, and staff estimate underpinning the FA support plan. However, to prevent overloading the commander, CPs should first screen information. FA commanders, force FSCs/FSEs/FAIOs, and the CSS support structure should receive regular updates on the FA tactical situation as prescribed by unit TSOP to include the following:

- CCIR.
- Losses.
- Location and combat readiness of FA assets.
- Missions fired and results.

- Ability to adhere to FA timelines and decision points.
- Constraints and limitations, if any, to complete the mission successfully.

CLEARANCE OF FIRES

6-154. Procedures to clear fires rapidly should have been established in the preceding planning and preparation phases. Clear and understandable maneuver control measures and accurate reporting of friendly unit locations will assist in this effort. In addition, digitization should facilitate opportunities for attaining a more accurate and comprehensive picture of the battlefield. To maintain friendly force safety when firing on targets of opportunity, FA delivery units must first receive mission clearance from the appropriate FSEs in force CPs.

TARGET ATTACK

6-155. During the execution phase, targets selected during the planning phase/decide function and detected and tracked during the preparation phase/detect function are attacked if they meet required degrees of accuracy, dwell time, and attack standards and adhere to FSCMs, positive clearance of fire procedures, and ROE. Executing FA CPs, after validation, transmit execution orders through subordinate echelons to the attack system(s). Targets authorized for decentralized control are usually extremely time-sensitive and their selection is normally transmitted to the appropriate FA brigade or MLRS battalion directly from the acquiring sensor or supporting intelligence facility to preclude undue delay in further target processing. Targets under centralized control are often targets with longer dwell time such as ATACMS targets under corps or JTF control.

COUNTERFIRE OPERATIONS

6-156. The corps arty TOC will coordinate countermortar and counterbattery radar positioning and coverage with supported FSC/FSEs and establish QF channels between radars and firing units to rapidly silence enemy indirect fire systems. Corps arty and div arty TOCs will assess the success of ongoing counterfire efforts and recommend to force FSC/FSEs adjustments in force organization, intelligence collection, and/or attack priorities to enhance the attack of enemy counterfire targets.

LOGISTICS OPERATIONS

6-157. Based on the evolving tactical situation, CSS staff members assess adherence to projected timelines and losses and the impact of consumption rates on FA unit effectiveness. By monitoring the availability of vital CSS stocks for organic, attached, and supporting units, they adjust resources to accommodate requirements in support of actual and projected operations within existing constraints. They aggressively coordinate the timely shift of logistics responsibilities and assets in response to changes in FA tactical missions and AOs and monitor recovery operations and the repair of battle damaged systems and equipment.

CP DISPLACEMENTS

6-158. Subject to mission requirements, FA CPs will displace to best control all force artillery operations. In the process, critical functions should be passed to alternate or jump CPs to ensure continuity in the execution of current operations and to preclude any significant degradation in planning and preparation of follow-on missions.

ALTERNATE COMMAND POST OPERATIONS

6-159. If necessary, FA CPs perform alternate CP functions to enable supported maneuver and FA units to sustain operations while surviving elements are reconstituted to reestablish critical C2 functions. When designated as an alternate CP, FA TOCs should be equipped with the communications gear capable of performing critical functions of the destroyed/dysfunctional CP. As the alternate CP, they are normally not expected to support CP displacements. However, designation as the alternate CP and the successful transfer of functions require periodic staff drills to minimize disruptions of C2 capabilities over organic and supporting FA units during execution.

BATTLE DAMAGE ASSESSMENT

6-160. Post strike assessments, initiated during the planning phase, permit the commander and staff to determine whether FA fires have achieved stated targeting objectives within the limits of organic FA resources. BDA is an essential step in the D3A methodology because it measures things objectively that are important to the force commander. FA BDA assets are generally limited to Firefinder radars. Ensuring that feedback and reports by subordinate and supporting units are factual and timely, force artillery CPs assess available BDA results and recommend whether or not to reengage the target(s).

REORGANIZATION AND RECONSTITUTION

6-161. After mission completion, the commander and staff assess the combat readiness of subordinate units, determining residual combat capabilities and requirements for cross leveling and reorganizing FA attack and target acquisition systems.